

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

— — —

COMCAST CABLE : CIVIL NO. 12-859
COMMUNICATIONS, LLC, :
et al., :
Plaintiff :

v. :

SPRINT COMMUNICATIONS : Philadelphia, Pennsylvania
COMPANY L.P., et al., : February 7, 2017
Defendant : 9:36 a.m.

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TRANSCRIPT OF MORNING SESSION OF JURY TRIAL DAY 7
BEFORE THE HONORABLE JAN E. DUBOIS
UNITED STATES DISTRICT JUDGE

— — —

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14 transcription service.

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Mr. Yarkosky - Cross

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1 (The following was heard in open court at
2 9:36 a.m.)

3 THE COURT: Good morning, everyone.

4 ALL: Good morning, Your Honor.

5 THE COURT: Please be seated.

6 MR. RIOPELLE: Would you like Mr. Yarkosky
7 back on the stand?

8 THE COURT: Yes, that would be good.

9 (Pause in proceedings.)

10 THE COURT: Good morning.

11 THE WITNESS: Good morning.

12 CROSS-EXAMINATION

13 BY MR. HANGLEY:

14 Q Good morning, Mr. Yarkosky.

15 A Good morning.

16 Q Will you remind us of your title at Sprint?

17 A Yes, I'm the Director of Product Development and
18 Management for Value-added Services and Core
19 Services.

20 Q Okay. Now, when did you get that title?

21 A My -- I've had the title of Product Development
22 Management for those services since 2010.

23 Q I'm sorry. You've had the title for -- the
24 identical title since 2010?

25 A I've had the title of Director of Product

Mr. Yarkosky - Cross

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1 Development and Management for --

2 Q Since 2010?

3 A Yes.

4 Q And then when did it change?

5 A Change?

6 Q You added something about value-added products
7 and core services?

8 A The value-added services over the course of the
9 last couple of years, there's been more of an
10 emphasis on value-added services.

11 Q Okay.

12 A That's been added to my title.

13 Q And when was core -- when were core services
14 added to your title?

15 A Core services have always been part of the
16 responsibility of my title.

17 Q I didn't ask about the responsibility, sir. I
18 asked when your title was changed to include core
19 services. This year?

20 A No.

21 Q Last year?

22 A It -- as we -- my title in the last few years has
23 evolved, so in the --

24 Q But there comes a time --

25 A Yeah.

Mr. Yarkosky - Cross

5

1 Q -- when they give you a new business card,
2 doesn't there? I'm sorry I interrupted. I don't
3 intend to.

4 A Yep.

5 Q It's a contest between my following the rules and
6 my inherent rudeness.

7 THE COURT: I would suggest following the
8 rules.

9 MR. HANGLEY: Rudeness is (indiscernible).

10 THE WITNESS: Yeah, my official title is
11 Product Development and Management -- Director of
12 Product Development and Management, and we add in to
13 provide distinction to that, of Core Services and
14 Value-added Services.

15 BY MR. HANGLEY:

16 Q Now I'm -- how I'm confused. Is this core
17 services business part of your title or not?

18 A Yes, it is.

19 Q Formally on your job description, on the
20 organizational charts, et cetera, is this your title?

21 A That's my title.

22 Q And it became your title within the last year or
23 so?

24 A It's been my title for -- since around -- I'll go
25 back, about 2014 time frame.

Mr. Yarkosky - Cross

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1 Q Okay. Now, sir, I had the opportunity to read
2 your testimony from yesterday earlier this morning.
3 You used the word "core" a number of times, didn't
4 you?

5 A Yes.

6 Q If I said the number was 29 times, would that
7 surprise you?

8 A I don't recall how many times I said it, but no,
9 probably not.

10 Q Okay. And, sir --

11 (Pause in proceedings.)

12 Q -- did you rehearse your testimony?

13 A I met with my attorneys. I --

14 Q I'm not asking you to tell me about --

15 A Yeah.

16 Q -- meeting with your attorneys. I don't want to
17 know about your conversations with attorneys. I want
18 to know if you rehearsed your testimony.

19 A I prepared for my testimony. I didn't rehearse
20 my testimony.

21 Q How many times did you go over your testimony
22 with anyone?

23 A Two or three times.

24 Q How many days did you spend, how many hours did
25 you spend, reviewing your testimony with anyone, your

Mr. Yarkosky - Cross

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1 proposed testimony?

2 A Maybe an accumulation of four hours.

3 Q Okay. Okay.

4 (Pause in proceedings.)

5 Q Now, you -- one of the ways that you talked about
6 "core" yesterday was in terms of core services of
7 Sprint, correct?

8 A Yes.

9 Q And I think you said that you consider
10 messaging -- let me back up a little bit. One of the
11 things that you do in your position is watch over the
12 introduction or manage the introduction of new
13 products or services?

14 A Yeah, that's one of the roles that I perform.

15 Q Okay. And you -- what do I call it? You also
16 manage or oversee what I will call the end of life
17 care of products and services when they have played
18 out their utility or turned out not to be so
19 successful?

20 A Yeah, one of the -- as part of product
21 development and management, part of the role of
22 management is the life cycle management. So that's
23 the introduction, the ongoing management, and then
24 the end of life termination of a service.

25 Q Okay. And you've done that with some services?

Mr. Yarkosky - Cross

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1 A Yes, I have.

2 Q Okay. Now, you've been with the company since I
3 think you said 1993?

4 A No, 1996.

5 Q 1996. I apologize. And you're aware, are you
6 not, that the patent in this case was invented -- the
7 invention was invented -- forgive my awkward
8 phrasing -- was invented in 1999?

9 A Like I said, I wasn't familiar with the patent,
10 but for this trial, until it was shown to me.

11 Q Okay. And you were working at Sprint in 1999,
12 correct?

13 A Yes, I was.

14 Q Okay. And Sprint at the time had a cellular
15 network, right?

16 A Yes, we did.

17 Q Okay. And the cellular network had voice --
18 provisions for voice services and data services,
19 didn't it?

20 A In 1999, we operated voice -- primarily voice
21 services. We had circuit switch data at that time.

22 Q Okay. So the answer to my question is yes?

23 A Yes.

24 Q Okay. You didn't have messaging, did you?

25 A You know, I don't recall in 1999 if we had

Mr. Yarkosky - Cross

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1 messaging. I know we had like services that were
2 contemplating messaging and a short mail service I
3 think is what we called it.

4 Q SMS?

5 A No, it was called short mail --

6 Q Short mail service?

7 A Yeah.

8 Q Okay. If you heard testimony that the company
9 did not offer two-way SMS messaging in 1999, would
10 you disagree with that?

11 A No, I wouldn't disagree with that.

12 Q Okay. Okay. So if you talk about what were the
13 core elements of the cellular network in 1999, it
14 would not have included two-way messaging?

15 A Okay.

16 Q Okay.

17 (Pause in proceedings.)

18 Q Now, you're a -- I think you said a physicist by
19 training?

20 A By education.

21 Q By education. And you hold several patents?

22 A Yes, I do.

23 Q Okay. So you know what -- how patents work?

24 A Yes, I do.

25 Q And you understand the concept of claim

Mr. Yarkosky - Cross

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1 construction?

2 A From a high level, yeah.

3 Q And you understand that in construing a patent,
4 it is construed from the standpoint of a reasonably
5 skilled artisan at the time of the invention?

6 A I'm not a --

7 Q You don't know?

8 A Yeah, I --

9 Q All right.

10 A -- don't know.

11 Q That's fine. Now, today, as distinguished from
12 1999, as you've testified, SMS messaging is a -- what
13 you call a core service?

14 A I'm sorry, can you repeat your question?

15 Q Sure.

16 A Yeah.

17 Q You've testified that today, SMS messaging is a
18 core service --

19 A Yes.

20 Q -- of Sprint?

21 A Yes, SMS is a core service.

22 Q Okay. Indicating that it is important in a
23 business sense to Sprint, isn't it?

24 A Well, overall, in explaining -- yeah, as part of
25 a communication portfolio, voice messaging and data

Mr. Yarkosky - Cross

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1 are all important core services that we provide.

2 Q Okay. And you say as part of a portfolio. As
3 part of a package that you offer to your potential
4 customers?

5 A Yes.

6 Q Okay. It generates a good bit of the company's
7 revenue?

8 A I can't say specifically -- our service plan
9 generates revenue for the company.

10 Q Okay. Okay. And do you agree that it's
11 essential in that if you couldn't offer it, it would
12 be dramatically more different to sell your services?

13 A I --

14 Q If you were back in 1999 --

15 A Uh-huh.

16 Q -- when you didn't have SMS messaging, you would
17 have a hard time competing with the people who do
18 offer that, right?

19 A I'm not -- I'm not following your question.

20 Q Okay.

21 A I'm sorry.

22 Q If you didn't offer SMS messaging today, it would
23 be hard -- more difficult, much more difficult, to
24 sell your services, is that right?

25 A From a competitive perspective, yes, it would.

Mr. Yarkosky - Cross

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1 Q Okay. Okay. Now --

2 (Pause in proceedings.)

3 Q -- you were asked questions about something a
4 little different from core -- from essential or core
5 services. You were asked questions about the
6 definition of the cellular network. Do you recall
7 that?

8 A Not necessarily, no.

9 Q Okay. Okay. Now, what is in the cellular
10 network?

11 A The cellular network consists of everything
12 that -- starting with the handset to the RF
13 connection, the spectrum that connects the handset to
14 the bay station, the bay station to -- back in to the
15 elements that run the overall communication path. So
16 you would have switches, SMSCs, short message service
17 switching centers, MMSCs, HLRs, there's data
18 components for AAAs, PDSNs. So it's an acronym of
19 soup that make up the cellular network.

20 Q So you put everything into the cellular network?

21 A Everything that was required for communications
22 to occur, yeah.

23 Q Okay. What is an MMSC?

24 A An MMSC is the multi-media switching center.

25 Q Is it the multi-media switching center or the

Mr. Yarkosky - Cross

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1 multi-media service center?

2 A I think it can be called either, but we -- I
3 refer to it as the switching center.

4 Q Well, is there something called a mobile
5 switching center?

6 A Yes, there is.

7 Q Okay. And where does that reside? That's in the
8 core network, isn't it?

9 A Yes, it does.

10 Q Okay. And isn't it correct that most people
11 refer to this MMSC as a multi-media service center,
12 rather than a multi-media switching center because
13 it's not a switch?

14 A I've heard it referred to in both ways.

15 Q But it's not a switch?

16 A I've heard it referred to in both ways.

17 Q But it's not a switch?

18 A I can't answer that question.

19 Q You don't know?

20 A Huh?

21 Q You don't know?

22 A I -- my understanding of it is I've heard it
23 referred to in both ways, as a multi-media switching
24 center and a multi-media service center. So no, I'm
25 not the engineer of this system, so --

Mr. Yarkosky - Cross

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1 Q Okay.

2 (Pause in proceedings.)

3 Q Your deposition was taken in this case?

4 A Yes, I believe it was.

5 Q And do you recall --

6 MR. RIOPELLE: Objection, Your Honor. I
7 don't think he can use the deposition to impeach him
8 unless he's got a question, and I haven't heard a
9 foundational question yet.

10 THE COURT: Sustained. Sustained.

11 (Pause in proceedings.)

12 BY MR. HANGLEY:

13 Q I asked you earlier whether "core" was in your
14 title.

15 A Yes.

16 Q And I think you said -- well, tell me again what
17 you said, if you don't mind.

18 A My title, Director of Product Management and
19 Development, or Development Management, for Core
20 Services and Value-added Services.

21 (Pause in proceedings.)

22 Q But as of the time when you were deposed, that
23 was not your title, was it?

24 A I don't recall.

25 Q Well, do you recall testifying that your title

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1 was Director of Product Development at your
2 deposition?

3 A I think my deposition was taken almost two years
4 ago.

5 Q Well, it was taken on April 29, 2015.

6 A Okay.

7 Q So you think this "core" title came on later than
8 that?

9 A No, I was always responsible for that space of
10 core services, so --

11 Q But it --

12 THE COURT: Let him finish.

13 THE WITNESS: Yeah. So my responsibilities
14 always included the core services. And depending on
15 setting and where I'm discussing and who I'm meeting
16 with, my title, to be descriptive, as I've talked
17 about, can be Product Management and Development for
18 Core and Value-added Services.

19 BY MR. HANGLEY:

20 Q Your title changes to suit the audience?

21 A My -- depending on setting --

22 Q Is that --

23 THE COURT: No, let him -- let him finish.

24 THE WITNESS: Yeah. In a business setting,
25 in order to be descriptive of what I'm responsible

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1 for, yes.

2 BY MR. HANGLEY:

3 Q Okay. But your LinkedIn profile, at the time at
4 least, didn't say anything about core services, did
5 it?

6 A I can't tell you if it did or didn't.

7 Q All right.

8 (Pause in proceedings.)

9 Q Now, do you recall testifying in a trial in
10 Delaware Federal Court?

11 MR. RIOPELLE: Objection, one, the
12 relevance, and two, he can't use it to impeach him
13 until he has a foundational question again.

14 THE COURT: I agree. You haven't been
15 doing that. If you're going to use transcripts,
16 let's identify the transcript, date, then ask him a
17 question -- ask him whether that was the answer he
18 gave on that occasion.

19 BY MR. HANGLEY:

20 Q Don't you agree that messaging servers are not a
21 core element of the cellular network?

22 A I'm -- can you repeat that question, please?

23 Q Don't you agree that messaging servers are not a
24 core element of the cellular network?

25 A I do not agree with that statement.

Mr. Yarkosky - Cross

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1 Q Okay. Do you recall testifying -- do you recall
2 testifying at a trial in Delaware?

3 MR. RIOPELLE: Does counsel have a copy of
4 this transcript?

5 MR. HANGLEY: Yes, sir.

6 MR. RIOPELLE: For me. I know you have
7 one.

8 MR. HANGLEY: I'm sorry.

9 (Pause in proceedings.)

10 MR. HANGLEY: Let's get Mr. Riopelle a
11 copy.

12 (Pause in proceedings.)

13 BY MR. HANGLEY:

14 Q Let me ask another question.

15 A Sure.

16 Q What is a CDMA network?

17 A A CDMA network is a wireless cellular network.

18 Q Okay. And what is -- what are the elements --
19 I'm sorry. Do you agree that messaging is not part
20 of the CDMA network -- messaging servers are not
21 part?

22 A No, I don't agree with that statement.

23 MR. HANGLEY: Do we have a copy to put
24 before the witness?

25 (Pause in proceedings.)

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1 MR. HANGLEY: I haven't yet marked this,
2 Your Honor. Should I mark it?

3 THE COURT: No, you can just refer to it as
4 his deposition.

5 MR. RIOPELLE: Can you refer to the
6 language (indiscernible)?

7 MR. HANGLEY: I will do that.

8 (Pause in proceedings.)

9 BY MR. HANGLEY:

10 Q Sir, I'm showing you -- I've shown you and ask
11 you to confirm that this is a copy of your testimony
12 in the United States District Court, Wilmington
13 Delaware.

14 MR. RIOPELLE: I think you can stop there.

15 MR. HANGLEY: I've got the wrong one.

16 Okay.

17 BY MR. HANGLEY:

18 Q -- Wilmington Delaware on October 8th?

19 THE COURT: What year?

20 MR. HANGLEY: 2015.

21 (Pause in proceedings.)

22 MR. HANGLEY: I'm checking the date on
23 that.

24 (Pause in proceedings.)

25 BY MR. HANGLEY:

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1 Q Okay. And, sir, when you take a look at page --
2 2014, I apologize. By the way, were you Director of
3 Core Services at that time?

4 A Yes, I was.

5 Q Now, take a look at page 833. At the bottom of
6 832 you were asked,

7 Question: "Can you explain to the jury
8 what your understanding of the CDMA network is?" Do
9 you see that question, very top of page 833?

10 (Pause in proceedings.)

11 A Hold on one second.

12 Q It starts at the bottom of 832.

13 A Okay. Yep, I see it.

14 Q And what was your answer? Will you read it to
15 the jury, please?

16 MR. RIOPELLE: Your Honor, I'm -- I don't
17 see how this is impeaching him, just --

18 THE COURT: Well, no argument. I don't --
19 Mr. Hangley has spent so much time coming up with one
20 copy for the witness, I'm not going to have him delay
21 the trial to get me a copy. So I'm going to hear
22 what he has to say. I'll overrule the objection.

23 MR. HANGLEY: Thank you, Your Honor.

24 THE COURT: From now on, if you're going to
25 use a deposition, very simply, copy for the witness,

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1 you need a copy, opposing counsel needs a copy, I
2 need a copy, and we'll need a transcript of any trial
3 testimony as well.

4 MR. HANGLEY: Here are two more copies. I
5 apologize for that, Your Honor.

6 THE COURT: Thank you. All right, now the
7 question.

8 BY MR. HANGLEY:

9 Q The question is bottom of 832 and going over,
10 Question: "Explain to the jury what your
11 understanding of the CDMA network is." And your
12 answer?

13 A Was,

14 Answer: "Yes. So the CDMA network is" --

15 Q Slow down, please.

16 A I'm sorry.

17 Answer: "Yes. So the CDMA network is,
18 again, a network that consists of a collection of bay
19 stations, which provides wireless connectivity to
20 handsets, and that is connected to the core network
21 via another component called the bay station
22 controller. And that bay station controller connects
23 the core network, both circuit switch core network
24 and packet core network, to those bay stations."

25 Q Okay. So it's circuit switch core network and

Mr. Yarkosky - Cross

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1 packet core network to those bay stations, correct?

2 A Yes.

3 Q And so the core network consists of those things?

4 That's what you said under oath.

5 (Pause in proceedings.)

6 Q Let's go back to 832, sir. I asked you also what
7 the Sprint network consisted of.

8 A You asked me that when?

9 Q Earlier today I thought, but you can tell me now.
10 What does the Sprint network consist of?

11 A Sprint operates a wireline network and a wireless
12 network that's --

13 Q Okay. So if one were to talk about the Sprint
14 network, you would need further clarification?

15 A Which -- yeah, it depends on which net -- if you
16 were talking about the wireline network or the
17 wireless network.

18 Q Okay. And you -- let's -- you would also if you
19 were going to talk about the core Sprint network
20 would still need clarification, wouldn't you?

21 A If you were asking about the core network,
22 there's commonality, but yeah, I would need further
23 clarification of whether you were talking about the
24 wireless network or the wireline network.

25 Q Okay. Now, if you were talking about the

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1 wireless network, what would it consist of?

2 A As -- I think as I answered earlier, it would --
3 it would consist of the handset, the spectrum, the
4 bay stations, bay station controllers, and the
5 core, and the core network elements, in that core,
6 the network elements necessary to operate the
7 wireless network.

8 Q Okay. And do you agree that it wouldn't include
9 the messaging servers?

10 A I would not agree with that, no.

11 Q Okay. Again, can we go back to your deposition
12 at page 832?

13 THE COURT: You mean the trial testimony?

14 MR. HANGLEY: I'm sorry, the trial
15 testimony.

16 BY MR. HANGLEY:

17 Q You were talking about the wireless -- Sprint
18 wireless network, weren't you? But would you take a
19 look at page 832, line five, where you were asked,

20 Question: "When you hear the term 'Sprint
21 network' what does that mean to you?" What was your
22 answer?

23 A My answer was,

24 Answer: "Yeah. The Sprint network is
25 fairly -- a fairly vast network, and when I hear the

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1 Sprint network, primarily being a wireless network, I
2 gravitate towards and give my background towards the
3 wireless network. That network -- that wireless
4 network really consists of a core network that being
5 characterized as circuit switch -- circuit switch
6 voice network and packet data network as the core.
7 Both these networks are then connected to the bay
8 stations that provide, so to speak, the last mile
9 connection to the customer in their handset."

10 Q Okay. So you included circuit switch, voice
11 network, and packet data network as the core,
12 correct?

13 A Yes.

14 Q You did not include messaging service?

15 A Not specifically, no.

16 Q Well, you didn't include them at all, did you?
17 They either were or were not in your answer.

18 A Well, as it relates, voice and data messaging is
19 implicit in there. We don't explicitly call out
20 messaging all the time, but messaging, as a service,
21 historically is ridden over the circuit switch
22 network as well as the packet data network.

23 Q We can agree that SMS messaging travels over the
24 circuit switch network, correct?

25 A Historically, yes --

1 Q Historically.

2 A -- it has.

3 Q Yes. It sometimes now goes over the internet,
4 doesn't it?

5 A Yes.

6 Q Okay. And we can agree that multi-media messages
7 go over the internet, correct?

8 A They went over the circuit switch network for a
9 period of time and then over the IP network, the data
10 network, yes.

11 Q Okay. And they will -- to get to the -- to
12 operate through the cellular channels they use the
13 circuit switch, correct?

14 A They use circuit switch and/or packet switch
15 networks.

16 Q Okay. And to get on the internet they have to
17 use packet switching today?

18 A Yes.

19 Q Okay. Now --

20 (Pause in proceedings.)

21 Q -- this use of "core" that you -- I mentioned 29
22 references. You used -- you referred to core sites.
23 Do you recall that?

24 A Yes, I do.

25 Q Now, are there, in fact, places in the network

1 that you were referring to when you talked about
2 these core sites or that -- let me rephrase the
3 question. Are there places on the properties of
4 Sprint, physical properties of Sprint, that you are
5 referring to as these "core sites?"

6 A I'm not a network architect, but there are
7 properties, Sprint-owned properties, that house the
8 equipment that is part of our core network, yes.

9 Q They house the equipment that is part of your
10 core network?

11 A That's correct.

12 Q Okay. And would you agree with me that they're
13 almost never, if ever, referred to as "core sites"
14 around Sprint?

15 A I'm -- can you repeat your question?

16 Q Sure.

17 A I want to make sure I understand.

18 Q I've been looking at Sprint documentation and
19 I've had a hard time finding any references to "core
20 sites" other than in your testimony yesterday, and
21 perhaps that of other witnesses yesterday. When did
22 Sprint start referring to these as "core sites?"

23 A Well, I've been at Sprint since 1996 and it's a
24 fairly common term for us to use to talk about the
25 core network sites.

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1 Q And where -- can you identify one of those sites?

2 A A couple. I referred to one yesterday in Reston,
3 Virginia.

4 Q Okay.

5 A There happens to be one in Lenexa, Kansas.

6 And -- but, again, I don't know all of the locations
7 for them.

8 Q Well, and people around the company, how do they
9 refer to what you referred to yesterday as the Reston
10 core site? They don't call it that, do they?

11 A They may say the -- they may say the bunker in
12 Lenexa, Kansas or -- I don't know how they would --
13 else they would refer to the Reston location, but
14 those are, you know, core locations for us.

15 Q Well, there's the Reston bunker, correct?

16 A I don't know if it's referred -- I can't say if
17 it's referred to as the Reston bunker.

18 Q Is it referred to as the Reston datacenter?

19 A I -- again, I don't know. It could be, yes.

20 Q Is the north bunker, the NOB, have you heard that
21 phrase?

22 A I have no heard NOB, but --

23 MR. HANGLEY: I'm going to ask, Your Honor,
24 I'd like to use the ELMO to take the witness through
25 one of defendant's exhibits.

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1 THE COURT: You may.

2 MR. HANGLEY: Okay. And I'd like to ask my
3 colleague, Andrew Erdlen, to run the ELMO in order to
4 avoid all manner of disasters.

5 THE COURT: You may do that.

6 MR. HANGLEY: And I'm referring to DX-13.
7 I have marked areas of it to show the phrase I want
8 to ask the witness about. We'll put it on the
9 screen.

10 (Pause in proceedings.)

11 THE COURT: Is PX-13 in evidence?

12 MR. HANGLEY: PX-13 is in evidence, Your
13 Honor.

14 (Pause in proceedings.)

15 MR. HANGLEY: Actually, Your Honor, there's
16 a motion to put it in evidence. I don't know whether
17 Your Honor has approved that motion yet -- acted on
18 that motion. We have objected -- we have agreed to
19 it.

20 THE COURT: Well, we'll receive it in
21 evidence.

22 (Defendant's Exhibit 13, document, is
23 admitted into evidence.)

24 MR. RIOPELLE: Thank you, Your Honor.

25 THE COURT: Does Sprint have a motion with

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1 respect to its exhibits?

2 MR. RIOPELLE: We do, Your Honor, and we
3 just didn't want to interrupt the flow once the jury
4 came in the room, so we were going to make it after
5 this witness. But we're happy to make it now at the
6 Court's pleasure.

7 THE COURT: Well --

8 MR. RIOPELLE: That may make it easier for
9 Mr. Hangle. I believe all -- everything on the list
10 is already agreed to, so I don't -- if we hear
11 objections, then certainly we shouldn't proceed and
12 waste the jury's time.

13 THE COURT: Well, why don't we -- let's not
14 spend anymore time interrupting. And that was at my
15 invitation, by the way. Let's do it at the end.

16 MR. RIOPELLE: Okay.

17 THE COURT: I don't want you to read a list
18 of the exhibits that are being moved into evidence.

19 MR. RIOPELLE: Understood.

20 THE COURT: So Mr. Hangle can raise the
21 question. If I ask, you can -- you can answer.

22 MR. HANGLEY: Show the cover page, please.
23 I'm not seeing it. Oh, we -- I guess we have to ask
24 somebody to turn the switch?

25 MR. ERDLIN: It's coming on.

Mr. Yarkosky - Cross

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1 MR. HANGLEY: See, aren't you glad I have
2 all this help, Your Honor?

3 THE COURT: Yes. Without it, we would be
4 here for weeks and weeks.

5 (Pause in proceedings.)

6 BY MR. HANGLEY:

7 Q Showing you a copy of something that's in
8 evidence as the Defendant's Exhibit -- Defense
9 Exhibit 13. Can you tell me what it is?

10 A I can read the title if you would like.

11 Q Okay. It's the "Next Generation Messaging and
12 Imaging," and it's a design document? Have I got
13 that correct?

14 A Yes.

15 Q Are you familiar with documents of this type?

16 A I've seen documents of this type --

17 Q Okay.

18 A -- before, yes.

19 Q Do you look at them as -- in your capacity as
20 Director of -- the title?

21 A Yeah, although this one was written in 2008, so
22 it would have preceded my time in my role.

23 Q Okay. Okay. But you recognize this type of
24 document?

25 A Yes.

Mr. Yarkosky - Cross

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1 Q It's a typical business record?

2 A Yes.

3 Q Okay. Now, sir, when you -- when you go to page
4 26 --

5 MR. RIOPELLE: Your Honor, I'd like to
6 object. I think he needs to establish that this
7 witness has seen this document before he starts
8 asking him questions about it.

9 MR. HANGLEY: I'm asking him how the --

10 THE COURT: Well, don't tell me what --
11 lay a foundation. You don't have to tell me what you
12 intend to do. Lay a foundation and then do it.

13 MR. HANGLEY: Okay. I think I have, Your
14 Honor. I'm asking the witness questions about how
15 these so-called core sites that he talked about
16 yesterday have been referred to in the business
17 parlance of Sprint.

18 THE COURT: All right. Cover it as you see
19 fit, but lay a foundation. He said -- for example,
20 this document is dated May 6th, 2008, and he said
21 that predated his present job title.

22 MR. HANGLEY: But it is a business --

23 THE COURT: All right.

24 MR. HANGLEY: -- record of Sprint.

25 THE COURT: That's correct.

Mr. Yarkosky - Cross

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1 MR. HANGLEY: And he said that too.

2 THE COURT: He said a lot of things. Go
3 on, Mr. Hangle.

4 MR. HANGLEY: Thank you.

5 BY MR. HANGLEY:

6 Q Will you please go to page 26, sir?

7 A I don't --

8 (Pause in proceedings.)

9 Q Now, I'm looking at the overview of something.
10 Can you tell what it is?

11 A The title reads "Section 3.2.2.4." Is that the
12 one you're looking at?

13 Q Yes.

14 A And it says, "Post-deployment State
15 Functionality."

16 Q By the way, can you tell me what doc -- what
17 products are being brought in under this document?

18 A I -- sir, I would have to read the whole document
19 in order to --

20 Q Well, I mean --

21 A -- have more familiarity with it. I mean, again,
22 this predated me, so I, quite honestly, would want to
23 review the document before I could really talk about
24 what's in it.

25 THE COURT: Have you seen this document

Mr. Yarkosky - Cross

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1 before?

2 THE WITNESS: I have not seen this document
3 before, no, not this specific document.

4 BY MR. HANGLEY:

5 Q You don't --

6 A I've seen documents of this type, but --

7 THE COURT: Not that one?

8 THE WITNESS: Not this particular one, no.

9 BY MR. HANGLEY:

10 Q But, sir, you know what the Mercury Project was,
11 don't you?

12 A Yeah. Boy, you know, we've had code names for
13 things. Yeah, I don't know that I recall what
14 Mercury specifically was.

15 Q Pardon me?

16 A I don't know that I could recite specifically
17 what Project Mercury was.

18 Q Okay. Do you recall when Acision servers were
19 brought in for the SMS messaging?

20 A I don't recall the specific date for that. I
21 know when the MMS servers were brought in, but not
22 the SMS servers.

23 Q And when was -- when were the MMSs brought in?

24 A We started that project in 2010 when I joined the
25 group.

Mr. Yarkosky - Cross

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1 Q Okay. Okay. Now, what I'm really interested in
2 in this document is taking a look at page 26, which
3 we have on the screen. It discusses the deployment
4 of an SMSC?

5 MR. RIOPELLE: Your Honor, I'm going to
6 object. He's testified he hasn't seen this document,
7 and he hasn't laid a foundation for him to ask him
8 about this document.

9 THE COURT: Sustained.

10 (Pause in proceedings.)

11 BY MR. HANGLEY:

12 Q Do you agree that with respect to these Reston
13 and Lenexa facilities, you refer to them sometimes as
14 datacenters?

15 A I think in the course of business, sure, I've
16 heard them call datacenters, core sites. You know,
17 in conversation there's references to our regional
18 datacenters, our central datacenters, et cetera,
19 yeah, so --

20 Q Okay. What I'm -- what I'm interested in finding
21 though, sir, is any place where before 2012, these
22 datacenters were referred to as core sites. Let me
23 rephrase that again.

24 A Yeah.

25 Q Anyplace before you got into litigation, before

Mr. Yarkosky - Cross

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1 Sprint got into litigation with Comcast, in which the
2 definition of "cellular network" and the term "core
3 sites" or "core" or "core elements of the network"
4 was involved, were people referring to these bunkers
5 or datacenters as "core sites?"

6 A Well, I -- again, I've been in the company for
7 almost coming up to 21 years in July, and --

8 Q But --

9 A Yeah. And I've had several conversations and
10 several discussions, several ops reviews, where we've
11 talked about the core network and core sites. I --
12 as far as documentation, I'm sorry, I -- you know, I
13 don't know. It -- but --

14 Q You --

15 A -- that's a very common term for us to talk
16 about, our "core network."

17 Q You've seen plenty of documentation when people
18 write it down where Lenexa is referred to as a
19 datacenter, haven't you?

20 A I can't recall specifically if I've seen that,
21 but, again, I've heard it referred to as that as
22 well.

23 Q And the North -- that is the Lenexa, referred to
24 as a datacenter or as the north bunker?

25 A Again --

Mr. Yarkosky - Cross

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1 Q You've heard those phrase several times?

2 A Yes, I have heard those phrases.

3 Q Okay. And you've seen them many times in written
4 documents, technical documents, prepared inside the
5 company?

6 A Again, I can't recall that I've seen it many
7 times, but I'm sure I have seen it.

8 Q Okay. And where is it that you in technical
9 documents before the litigation began have seen any
10 of these facilities referred to in writing as core
11 sites?

12 A Yeah, I mean, again, I don't know. I don't have
13 an answer for you. I -- because I don't have those
14 documents to refer to. And, quite honestly, I mean
15 it's passing conversation or as you see any
16 documentation or whether it's a presentation, there
17 is a central understanding --

18 Q I --

19 A -- there's an understanding internal to Sprint
20 relative to where we're talking about the Reston
21 location and the Lenexa location that we're talking
22 about core network and core network functionality. I
23 think even in one of my emails that I was on we
24 talked about core network locations.

25 Q Okay. May I ask you, please, to look at your

Mr. Yarkosky - Cross

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1 deposition -- let's see if I can show him his
2 deposition -- of --

3 (Pause in proceedings.)

4 Q -- April 29, 2015.

5 MR. RIOPELLE: Is there a foundational
6 question upon which you are going to attempt to use
7 the deposition?

8 MR. HANGLEY: There is indeed. The
9 question of how the company refers to these sites.
10 And do you need a copy for the Court?

11 (Pause in proceedings.)

12 BY MR. HANGLEY:

13 Q Have you gotten your dep -- well, you don't. Let
14 me -- let me ask you, please, to go to page 136, and
15 I'd ask you whether it was correct that people around
16 the company referred to these as regional datacenters
17 instead of, as what we called it yesterday, core
18 sites. Here's the deposition.

19 A Thank you.

20 Q And before I ask the next question, I just want
21 to confirm something. You were what we call a
22 30(b)(6) witness at that deposition, correct?

23 A I don't recall. I may have been.

24 Q Well, let's first confirm that fact.

25 (Pause in proceedings.)

Mr. Yarkosky - Cross

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1 A And, I'm sorry, can you repeat the page that you
2 asked me to look at?

3 Q Well, we're going to get there, because first,
4 I'll ask you to confirm that you were, in fact, the
5 30(b)(6) designee chosen by Sprint to testify on
6 certain subjects at this deposition. And I'll ask
7 you to take a look at page eight --

8 A Okay.

9 Q -- to confirm that to your own satisfaction.

10 (Pause in proceedings.)

11 A This is to confirm I was a 30(b)(6) --

12 Q You were a --

13 A -- witness?

14 Q -- were a 30(b)(6), yes, sir.

15 A Oh, yeah.

16 Q Okay.

17 A I see it right there.

18 Q Now, a 30(b)(6) witness, tell me if you agree
19 with this, is somebody who was named by the company
20 to be the company's voice with respect to those
21 particular topics as to which that person is
22 testifying, correct?

23 A Yes, that's my understanding.

24 Q Okay. And so when you were going to become a
25 30(b)(6) witness you prepared yourself and you went

Mr. Yarkosky - Cross

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1 out and put yourself in a position by perhaps
2 reviewing documents, perhaps talking to other people
3 in the company, to be the spokesperson of the
4 company, to speak as the company in answering certain
5 questions, correct?

6 A If I recall, yes.

7 Q Okay. Now, you were asked at that deposition at
8 page --

9 MR. RIOPELLE: Objection, Your Honor. I'm
10 sorry, you can ask a foundational question, and then
11 if it's inconsistent I believe, then he can ask -- go
12 to the deposition.

13 MR. HANGLEY: I asked the foundational
14 question a while ago, and that has to do with whether
15 or not Sprint people refer to this in daily parlance
16 as the regional datacenter and not the core site.
17 That question is why I brought this --

18 THE COURT: All right.

19 MR. HANGLEY: -- deposition here.

20 THE COURT: I think the foundation question
21 has been answered and now we're getting very, very,
22 very slowly into cross-examination. And I think
23 we're going to turn to page 136, is that correct.

24 MR. HANGLEY: I think we are.

25 BY MR. HANGLEY:

Mr. Yarkosky - Cross

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1 Q Where you were asked at line 22,

2 Question: "Physically, where is the
3 Acision SMSC MMSC?"

4 MR. HANGLEY: And, Your Honor, there was an
5 objection at that time too. Mr. Barry objected that
6 the question lacks foundation and assumes facts not
7 in evidence. I guess since the objective was made,
8 do I have -- do you need to overrule that or sustain
9 it?

10 THE COURT: Facts not in evidence --

11 MR. HANGLEY: At a deposition.

12 THE COURT: -- at a deposition taken two
13 years ago that I'm looking at for the first time?

14 MR. RIOPELLE: We withdraw it. Don't --

15 THE COURT: I suspect so.

16 MR. HANGLEY: Thank you, Mr. Riopelle.

17 THE COURT: Thank you, Mr. Riopelle.

18 BY MR. HANGLEY:

19 Q And now,

20 Question: "Physically, where is the
21 Acision SMSC MMSC?" Now you may answer. Your answer
22 is on 137, line two, and this is the company's
23 answer, correct?

24 A On what page, I'm sorry? 137, line two?

25 Q Line two.

Mr. Yarkosky - Cross

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1 A What I answered in this deposition is,

2 Answer: "So over time, these have evolved.

3 SMSCs used to be" --

4 Q Please slow down. It's -- you have a tendency to
5 go fast when you're reading.

6 A Sure.

7 Answer: "So over time, these have evolved.

8 SMSCs used to be located at switch sites. They may
9 be located at regional datacenters now. I don't know
10 specifically the physical location of the hardware.
11 It is either in the physical MSC site, the mobile
12 switching center site, or in what we describe as
13 regional datacenters. I haven't kept up with the
14 physical architecture over time as to the deployment
15 schemes."

16 Q Okay. So these regional datacenters now, are
17 these the -- for example, the Reston facility and the
18 Lenexa facility I've been asking you about?

19 A That would be a regional datacenter, yes.

20 Q And what the company does is describe them as
21 regional datacenters, correct?

22 A Yes.

23 Q Until yesterday when you described them as core
24 sites?

25 A The regional datacenters are part of our core

Mr. Yarkosky - Cross

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1 network, yes.

2 Q Thank you, Mr. Yarkosky.

3 MR. HANGLEY: I have no further questions.

4 THE COURT: Any redirect?

5 MR. RIOPELLE: Your Honor, I have no need
6 to redirect.

7 THE COURT: Thank you. Mr. Yarkosky, your
8 testimony is concluded. You may step down. Thank
9 you.

10 THE WITNESS: Thank you.

11 (Witness excused.)

12 MR. RIOPELLE: Your Honor, before we call
13 our next witness, may we have a quick sidebar?

14 THE COURT: Yes.

15 (Sidebar discussion as follows.)

16 THE COURT: (Indiscernible).

17 (Pause in proceedings.)

18 MR. RIOPELLE: Your Honor, this was the
19 Syniverse limiting instruction that the parties had
20 agreed on, and I thought that it made sense to do it
21 now since Mr. Yarkosky had testified so much about
22 numbers.

23 MR. HANGLEY: I don't think so. Do you --
24 what do you think?

25 MR. RIOPELLE: I mean I thought it was a

1 limiting instruction the parties agreed that we were
2 going to give --

3 THE COURT: Yes.

4 MR. RIOPELLE: -- during the course of the
5 trial.

6 THE COURT: At an appropriate time. The
7 only question is when.

8 MR. RIOPELLE: Okay.

9 THE COURT: When it's first -- it's been
10 mentioned. And who's going to testify about this?

11 MR. RIOPELLE: Mr. Yarkosky just did all
12 day yesterday.

13 THE COURT: Oh, all right.

14 MR. RIOPELLE: That's why we thought it
15 would be appropriate now.

16 THE COURT: All right. That was agreed
17 upon.

18 MR. HANGLEY: Yeah. Are you fine with
19 that? Okay.

20 MR. RIOPELLE: Okay.

21 THE COURT: Anything else?

22 MR. RIOPELLE: Yes, just one more thing,
23 and this is just (indiscernible). I am going to be
24 leaving the courtroom now. I'm going to be leaving
25 the courtroom now. I just wanted to let you know

1 why. I'm going home for about 24 hours to be with my
2 family. I will be back here tomorrow. But I just
3 wanted you to know when you saw that I wasn't there
4 why I wasn't here.

5 THE COURT: Well, again, you have my
6 condolences. You can certainly be excused.

7 MR. RIOPELLE: And I will be back, but I
8 just wanted to let you know. Thank you. My friend
9 is going to bear the burden.

10 MR. HANGLEY: I can help.

11 MR. RIOPELLE: Oh, you can help? Okay,
12 we'll let you know.

13 (Sidebar discussion concludes.)

14 THE COURT: I've been asked to give you
15 what is referred to as a limiting instruction.
16 You've heard some testimony regarding the Syniverse
17 Picture Mail servers Mr. Yarkosky testified to. You
18 do not have to decide whether Sprint's MMS messaging
19 using Syniverse Picture Mail servers infringes the
20 870 patent. However, you may consider evidence
21 related to Syniverse Picture Mail to the extent it
22 bears on your decision on Comcast's claim that Sprint
23 has infringed the 870 patent through its use of
24 messaging servers other than Syniverse Picture Mail.

25 I think I'll repeat that. Judging by the

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1 expression on your faces, I better repeat it.
2 Yesterday, Mr. Yarkosky testified regarding Syniverse
3 Picture Mail servers. You do not have to decide
4 whether Sprint's MMS messaging using Syniverse
5 Picture Mail servers infringes the 870 patent. You
6 may consider evidence related to Syniverse Picture
7 Mail to the extent it bears on your decision on
8 Comcast's claim that Sprint has infringed the 870
9 patent through its use of messaging servers other
10 than Syniverse Picture Mail. All right.

11 MR. FINKELSON: Thank you, Your Honor.

12 THE COURT: We will proceed.

13 MR. FINKELSON: Sprint calls Mark Lipford
14 to the stand, Your Honor.

15 (Pause in proceedings.)

16 MARK LIPFORD, Defendant's Witness, Sworn.

17 COURTROOM DEPUTY: Please be seated.

18 Please state your full name and spell it for the
19 record, please.

20 THE WITNESS: It is Mark Lipford, -A-R-K L-
21 I-P-F-O-R-D.

22 THE COURT: Good morning, sir.

23 THE WITNESS: Good morning.

24 DIRECT EXAMINATION

25 BY MR. FINKELSON:

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1 Q Good morning, Mr. Lipford.

2 A Good morning.

3 Q Could you please introduce yourself to the jury,
4 sir?

5 A Sure. My name is Mark Lipford. I'm the Director
6 of Global Standards and Ecosystem Development for
7 Sprint.

8 Q Can you explain to the jury what that title
9 means?

10 A Yes. I lead a team of engineers and we represent
11 Sprint in wireless technology standards around the
12 globe.

13 Q Okay. When did you start getting involved in
14 standards-related activities at Sprint, Mr. Lipford?

15 A That was a long time ago. I actually started in
16 1998. I was the manager of Sprint's wireless data
17 and messaging standards.

18 Q Okay. And we've heard some talk about standards
19 and you've mentioned them. What is a standard in the
20 telecommunications industry, sir?

21 A Sure. A standard defines how a feature or a
22 service should perform, should work with other
23 features, work with other services. The way I've
24 always explained it to my mom, because she never
25 understands what I do either, is if, you know, I

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1 carry an iPhone and when I make a phone call it has
2 to connect to a bay station that may be provided by
3 Ericsson, connect to a switch that could be from a
4 Cisco or another company, and it may connect to
5 another Android phone or Samsung phone. How does all
6 that work? Standards defines the mechanism so that
7 these vendors will know how to build the systems so
8 that when you place a phone call it will connect, or
9 when you want to access the internet. So you can see
10 that from a vendor perspective, as well as an
11 operator perspective, standards are very important to
12 us in the industry.

13 Q Thank you, sir. Let's go back to your early days
14 at Sprint. Can you let the jury know when you first
15 joined the company?

16 A Sprint was my first real job out of college. I
17 graduated in 1985 and started working in 1987 for
18 Sprint. And over the years, I've held a number of
19 different technology positions within Sprint.

20 Q Where did you go to school?

21 A Sure. I went to school at North Carolina State
22 University in Raleigh. I like to say my heart is
23 still there, but most of my money seems to go to
24 Kansas State these days with two boys in school
25 there. But I graduated with a degree in electrical

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1 engineering.

2 Q And what year did you obtain that degree?

3 A It was 1985.

4 Q So let's talk about when you started your
5 standards role at Sprint in 1998 I believe you said.
6 Were there particular groups that you were active in?

7 A Yes. Because Sprint's 3G network is what we call
8 an ANSI-41 CGMA2000 network, I was working in
9 organizations that provided that -- those standards,
10 the specifications, specifically the -- a group
11 called the CDMA Development Group and also
12 Telecommunications Industry Association, and they
13 were pretty involved in the ANSI standard setting
14 process.

15 Q And can you explain in more detail to the jury
16 what ANSI is?

17 A ANSI is the North American Standards Institute.
18 They are an American-based organization that provide
19 American-based standards. To be accredited as an
20 ANSI standard, it's a significant amount of checks
21 and balances. You have to prove the document has
22 gone through the appropriate development and revision
23 process and management processes.

24 Q Are you familiar with the acronym, ETSI?

25 A Yes, ETSI stands for the European

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1 Telecommunications Standards Institute. They are
2 responsible for some of the standards related to GSM
3 technology or UMTS, GPRS. Again, it's a European
4 base, very different from the American-based
5 technologies. You can think of it as, you know, you
6 take an electrical plug that you have for your phone
7 or your lamp at home, try to plug it in to a European
8 outlet, it doesn't fit. They're different. So --

9 Q You mentioned an acronym, UMTS. Is there a
10 synonym for UMTS?

11 A Yes, UMTS is the technical acronym, but it stands
12 for WCDMA, wideband CDMA.

13 MR. FINKELSON: Your Honor, I've got a
14 binder of exhibits for the witness. If I may
15 approach with a copy?

16 THE COURT: You may.

17 (Pause in proceedings.)

18 MR. FINKELSON: I got to -- I have to do
19 them one at a time.

20 (Pause in proceedings.)

21 THE WITNESS: Okay.

22 (Pause in proceedings.)

23 MR. FINKELSON: Your Honor, I'd like to go
24 ahead and move the admission of the documents that
25 are in this binder. It contains DX-3, which is

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1 already in evidence, but then I'd move the admission
2 of the remaining exhibits which I understand are
3 unobjected to, which is DX-4, 5, 6, 7, and 8.

4 MR. GOETTLE: No objection, Your Honor.

5 THE COURT: DX-4, 5, 6, 7, and 8 are
6 received into evidence.

7 (Defendant's Exhibits 4, 5, 6, 7, and 8,
8 documents, are admitted into evidence.)

9 MR. FINKELSON: Thank you, Your Honor.

10 BY MR. FINKELSON:

11 Q I'd like to start with DX-3.

12 A Okay.

13 Q And I'll also put it up on the screen, so whether
14 it's easier for you to flip --

15 A Okay.

16 Q -- Mr. Lipford, or see on the screen, I leave
17 that up to you. Have you worked with this document
18 before, DX-3?

19 A Yes, I've worked with this document in the past.

20 Q And can you explain to the jury what it is?

21 A Sure, this is a copy of the ANSI-41 CDMA2000
22 specification. And if you'll go to one of the pages,
23 it's on 1-IV, we can see that it's a July of 1997
24 version of that document.

25 Q We'll give Mr. Baird an opportunity to pull that

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1 up.

2 (Pause in proceedings.)

3 Q Is that what you're referring to, Mr. Lipford?

4 A Yes. Yes.

5 Q And what are the words that appear here in the
6 revision history?

7 A It is revision zero, the date is July of 1997,
8 and it's an initial ANSI publication.

9 Q Let's go ahead and turn to page 1-III.

10 A Okay.

11 Q Do you have that, sir?

12 A Yes.

13 Q And if you scroll down the page -- well, first,
14 can you identify what appears on this page?

15 A Yes, it's the forward to the document, which is
16 kind of an overview of purpose and scope of the
17 document.

18 Q And what does it say in the following two
19 sentences?

20 A This is a series of recommendations. It's not
21 part of the standard, but it's a series of
22 recommendations that's entitled to cellular radio
23 telecommunications inter-system operation. And, you
24 know, there's a lot of other words on there, but it
25 describes the procedures that are necessary to

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1 provide a cellular radio telephone subscriber certain
2 services.

3 Q And is -- DX-3, is the title of it "Cellular
4 Radio Telecommunications Inter-system Operations?"

5 A Yes, it is.

6 Q Let's go ahead, if we could, and turn to page
7 1-24.

8 (Pause in proceedings.)

9 A Okay.

10 Q Can you describe for the jury, Mr. Lipford, what
11 appears on page 1-24?

12 A Yes, this is a picture of the network reference
13 model for a CDMA2000 cellular system.

14 Q And what does "network reference model" mean in
15 the context of the ANSI-41 CDMA2000 standards? Does
16 it have a meaning?

17 A Sure. Sure. Actually, I believe it's 1-7, if we
18 can go to that page?

19 MR. FINKELSON: 1-7? Thank you, Mr. Baird.

20 THE WITNESS: At the bottom of the page.

21 BY MR. FINKELSON:

22 Q Is this in -- is this in the definition section?

23 A Yes, this is within the definitions of the
24 document, and we can actually see the definition for
25 "network reference model," and it's, "The functional

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1 entities and the associated interface reference
2 points that may logically comprise a cellular
3 network."

4 Q And when it refers to "functional entities" do
5 you have an understanding of what that means and can
6 you provide that understanding to this jury?

7 A Sure. That's the hardware or the functions that
8 provide the services, and we can actually see some
9 examples of them in the diagram.

10 Q And it also makes a reference to "reference
11 points." Can you explain to the jury what that means
12 in the context of the ANSI-41 CDMA2000 standards?

13 A Yes, when we talk about the reference model it's
14 not just what entities or functions make it up, but
15 what are the relationships between the different
16 entities. So how are they connected? And we provide
17 those with the reference points that show the
18 connections between them that -- it's a fancy word
19 for interface.

20 Q All right. Let's go back to figure two, if we
21 could, on page 1-24. And my question is, as someone
22 who has worked with this document and with figure,
23 can you explain to the jury what it shows to you?

24 A Sure. And, actually, I mean there's a good
25 definition provided there. It presents the

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1 functional entities and the associated reference
2 points that may logically comprise the network.
3 So -- and it is defined within. So if you look at
4 it, you know, on the left side, you'll see the mobile
5 station. You've got the bay station, or the BS, kind
6 of in the left, center of the page. And you've got a
7 bunch of other entities like the MC, the message
8 center, the MSC, which is the switch, the HLR. I
9 mean pretty much everything in this picture except
10 for the PSTN and ISDN would compose the cellular
11 network.

12 Q And why do you say except for the PSTN and the
13 ISDN?

14 A These are networks and protocols that have been
15 previously defined. I mean the PSTN is your phone
16 company, it's the phone network. And, actually, on
17 page 1-25 of this document, there's actually
18 references to an NCT1 standard that defines these
19 entities and protocols.

20 MR. FINKELSON: I think we're moving that
21 up. I think it's the very last one on the page, Mr.
22 Baird. I believe so, but I'll allow the witness
23 to --

24 THE WITNESS: Yeah, it's -- that is for the
25 PSTN, and then you'll see that ISDN, which is just

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1 above it in 5.1.5 also has a similar reference to the
2 NCT1 document. So these are legacy networks and
3 protocols that shows how would a cellular network
4 connect so you can make a phone call.

5 MR. FINKELSON: If we can go back, Mr.
6 Baird, to the diagram? Thanks.

7 BY MR. FINKELSON:

8 Q I believe you made reference to the MC?

9 A Yes.

10 Q Is that right?

11 A Yes.

12 Q And what is the MC or where do you see the MC
13 depicted in the network reference model of DX-3?

14 A Well, it's in the bottom, center where it says
15 "MC," and then you'll see in the keys below it it
16 stands for "message center."

17 Q And is there, in fact, a definition of the MC
18 contained in this ANSI-41 CDMD2000 standard?

19 A Yes, there is, and I believe it is also on the
20 following page, 1-25.

21 (Pause in proceedings.)

22 A 5.1.6. So the MC is an entity that stores and
23 forwards short messages. The MC may also provide
24 supplemental services for short message service,
25 so --

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1 Q And, again, do I have it right that this is a
2 1997 standards document in connection with an ANSI-41
3 CDMA2000 cellular network?

4 A Yes, it is.

5 Q According to your understanding, sir, of figure
6 two that we've just been looking at, does the message
7 center in the 1997 ANSI-41 CDMA2000 standard
8 communicate with other cellular network elements?

9 A Yes, it does. As we talked about, the reference
10 points show those relationships. You can see in the
11 figure that there is a reference point N that
12 connects up to the HLR. The reference point M that
13 will connect over to other message centers are the
14 short message entities, as well as Q that connects up
15 to the MSC.

16 Q And as someone who worked with this 1997
17 standard, do you have an understanding of what the
18 purpose of the connection is between the message
19 center and the HLR?

20 A Yes, the message center when it receives a
21 message has to do a couple of things. It has to
22 verify that the user is subscribed to the service and
23 allow to either initiate the service or receive
24 messages. So it will send a query up to the HLR to
25 make sure they are properly provisioned and allow the

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1 service, as well as they can also request the HLR to
2 give them delivery information as to where was the
3 last, you know, MSC that this device was connected to
4 so it could route the message to the correct MSC, or
5 mobile switching center.

6 Q Thank you, Mr. Lipford. I'd like to turn to the
7 next exhibit in your binder, which is DX-4.

8 A This might take a minute.

9 Q You can get rid of the -- get rid of the large
10 one and --

11 A Yeah.

12 (Pause in proceedings.)

13 A Okay.

14 Q Do you have it?

15 A I've got it.

16 Q All right. Can you tell the jury what they're
17 seeing on their screen in DX-4?

18 A Yes, this is a network reference model for a
19 CDMA2000 Sprint Spectrum System, which is a CDMA2000
20 system. You'll notice it stated "Revision A," and
21 you'll also know the version date is December 13th of
22 1999.

23 Q We were just looking at DX-3 in 1997, and now
24 we've moved forward to 1999 in the standards for
25 CDMA2000, is that right?

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1 A That's correct.

2 Q And what is depicted or described in DX-4 at a
3 general level?

4 A Just like we've talked about the network
5 reference model in the previous DX-3 document, this
6 is a newer version of that document, of the network
7 reference model. It has the same meanings as
8 previously and it is more detailed because the
9 technology has changed in the two years it happened.
10 So this is a more current reflection of what a
11 CDMA2000 network is.

12 Q As of 1999?

13 A As of 1999.

14 Q And did you work, in fact, directly with DX-4,
15 this network reference model, in December of 1999?

16 A Yes, I actually helped contribute to some of the
17 changes that went in to this document, and so I'm
18 very familiar with this document.

19 Q Did you help design certain components or
20 entities that are described in this network reference
21 model?

22 A Yes. You know, in the diagram that -- if we
23 would look at that, I could point out the specific
24 ones.

25 Q Sure, and we'll turn to that in a sec.

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1 A Okay. Okay.

2 MR. FINKELSON: If I could go first to the
3 section of the document that appears on page 4821,
4 Mr. Baird. It's entitled "Purpose and Scope."

5 (Pause in proceedings.)

6 THE WITNESS: Yes, I have it.

7 BY MR. FINKELSON:

8 Q Okay. Mr. Lipford, can you tell this jury what
9 this document says the purpose and scope is of the
10 network reference model for CDMA2000 Sprint Spectrum
11 Systems in 1999?

12 A Yes, the purpose and scope of this document is to
13 provide -- this document recommends the basic 3GPP2
14 wireless network reference model. And with 3GPP2, it
15 means CDMA2000.

16 Q Having worked with DX-4, did you understand and
17 understand -- did you formulate an understanding back
18 in 1999 of what "3GPP2 wireless network reference
19 model" meant?

20 A Yes, it -- I had a very good understanding of
21 what it meant. I lived it and breathed it and worked
22 with it for a number of years.

23 Q And is the term "network reference model," to
24 your understanding as someone who worked with this
25 document, does it have the same meaning as it had in

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1 the 1997 document?

2 A Yes, the meaning would carry forward to this
3 document as well.

4 MR. FINKELSON: Can we call up figure 2.1,
5 Mr. Baird, in this document?

6 (Pause in proceedings.)

7 BY MR. FINKELSON:

8 Q There's a lot on the page.

9 A Yes.

10 Q Can you describe -- well, first, do you have an
11 understanding of what figure 2.1 depicts, sir?

12 A Yes, this is the 1999 wireless network reference
13 model.

14 Q And can you describe for the jury what it depicts
15 as someone who worked directly with this document?

16 THE COURT: Keep your voice up.

17 BY MR. FINKELSON:

18 Q Can you describe for the jury, Mr. Lipford, what
19 this document depicts, as someone who worked directly
20 with it?

21 A Sure. And as I mentioned, you know, I was
22 directly involved in some of these changes. There's
23 the PDSN kind of in the bottom, left side of it, and
24 the AAA. These were areas of my specific involvement
25 in the development of it, but I did have to

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1 understand all the relationships with the components
2 to make sure it was -- you know, these were
3 integrated correctly into the model. So on the left
4 side, you've got the composite entity titled "MS,"
5 which is the mobile station. It's your phone, for a
6 simple term. You've got a composite of the BS, which
7 is the base station equipment. And then you've got
8 kind of a dotted line that's called the collective,
9 and within the collective you've got the mobile
10 switching center, you've got the message center, the
11 HLR, the PDSN, the AAA that I spoke of, and all of
12 the elements that make up the CDMA2000 core network.

13 Q And is the collective entity designated with a
14 dotted line box around certain components?

15 A Yes, it's -- it is a dotted -- the dotted lines
16 that you'll see in the picture is the collective
17 entity.

18 Q And as someone who worked directly with this
19 document, did you understand what "collective entity"
20 meant?

21 A Yes, I think I actually said it just now by
22 mistake, but it's the core network. It is the
23 CDMA2000 core network. And we use that term a lot in
24 the meetings as well.

25 Q Does this document itself say "core?"

Mr. Lipford - Direct

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1 A It does not. It does use the term "collective,"
2 but, as I mentioned, having lived with this document
3 and worked with this document for a number of years,
4 without our -- my experience and the experience with
5 the group I worked in, we used "collective" and
6 "core" interchangeably.

7 Q And at this time in 1997, in the CDMA2000
8 standards, was the message center part of the core?

9 A Yes, you can actually see it just below the BS
10 composite entity within the collective. It's titled
11 "MC," and it is within the dotted box of the --
12 what's titled here as the "collective" or the "core
13 network," "CDMA core network."

14 Q And does the MC have the same meaning as the
15 meaning you read to the jury a few moments ago in the
16 1997 standard?

17 A Yes, it does.

18 Q Now, you referred to a composite entity when you
19 were talking about the MS, which I believe you said
20 was the mobile station, is that right?

21 A That's right.

22 Q Okay.

23 A The composite of the MS is the mobile station.

24 Q And is the BS also shown as a composite entity?

25 A It is shown as a composite entity within the

Mr. Lipford - Direct

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1 collective.

2 Q And is it within the dotted line box, and can you
3 describe your understanding of why?

4 A Yes, the BS at the time could -- there could be
5 parts of it and it could reside within the core
6 network or outside of the core network, you know, and
7 when the group came to a consensus of how best to
8 represent it, it was just included in the composite.

9 Q And whether it was inside or outside of the core
10 network, was it still part of the CDMA2000 cellular
11 network as of 1999, according to the standards?

12 A Oh, it was absolutely part of the CDMA2000
13 network.

14 Q I'd ask you to look, Mr. Lipford, at the next
15 document in your binder, which is DX-5.

16 (Pause in proceedings.)

17 Q Do you recognize DX-5, sir?

18 A Yes, this is revision B of the document we just
19 looked at, which was the network reference model for
20 CDMA2000 Sprint Spectrum System. This one is from
21 April of 2001, so it is a newer version of what we
22 just looked at.

23 Q And is it entitled "Revision B?"

24 A Yes, it is.

25 Q Did you work with this network reference model

Mr. Lipford - Direct

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1 for CDMA2000 that has been marked as DX-5 at the
2 time?

3 A Yes, I've worked with this document. In fact,
4 just a few months later in December of 2001, I became
5 the chair of the group that had ownership of this
6 document.

7 Q And what does that mean, you had ownership of the
8 document?

9 A It means we were responsible for making sure this
10 document was accurate, that it accurately reflected
11 the updates and changes to the network. Realize this
12 document is a blueprint. It tells how to build a
13 CDMA2000 network, what are the components, how are
14 they related, and this is the document that, you
15 know, we would then, you know, internally would hand
16 off to our design engineering teams that were
17 specialized in the particular elements, and they
18 would build the network with it, and the
19 manufacturers would use. So, you know, once this
20 document was handed off to our internal teams, you
21 know, how they chose to implement it was outside of
22 my scope, but this is how it was used.

23 Q And in this document, revision B dated April of
24 2001, was the message center still described as part
25 of the collective entity that you talked about a few

Mr. Lipford - Direct

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1 moments ago in connection with the 1999 version?

2 A Yes, I believe if we can go to the figure -- was
3 it figure one?

4 Q 2.1 I think.

5 A 2.1. You know, this figure probably looks very
6 familiar to what we were just looking at. There are
7 a few minor changes, but you'll see the message
8 center is right where it was located in the last
9 figure, still within the core network, CDMA core
10 network.

11 MR. FINKELSON: Would you mind highlighting
12 (indiscernible) C, Mr. Baird?

13 THE WITNESS: Yeah.

14 BY MR. FINKELSON:

15 Q Is that the message center, Mr. Lipford?

16 A Yes, that is the message center.

17 Q If you could actually skip ahead, Mr. Lipford, to
18 DX-8 in your binder?

19 A Okay.

20 (Pause in proceedings.)

21 Q Do you recognize DX-8, sir?

22 A Yes, this is a multi-media messaging services
23 requirements document dated October of 2002, and this
24 is actually a document that Sprint was very involved
25 in developing. You can actually see on the next page

Mr. Lipford - Direct

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1 that two of my Sprint colleagues were listed as
2 editors of this document.

3 MR. FINKELSON: Do you mind highlighting
4 the editors section?

5 BY MR. FINKELSON:

6 Q Are those the folks that you were just referring
7 to, Mr. Lipford?

8 A Yes.

9 Q They were part of your team?

10 A They did not report to me at the time, but they
11 were part of the Sprint standards team.

12 Q What are stage one requirements in a standards
13 document such as this one, sir, DX-8?

14 A Stage one is just a term we use in standards to
15 identify requirements and use cases, so, you know,
16 how -- what does the feature or the service, what
17 does it need to do, how should it work, how would it
18 interact with other network elements or features, and
19 what should the customers experience be? So we call
20 that a stage one.

21 Q I'd ask you to flip to the very last page of the
22 document. It's page 19. And my first question is
23 whether you're generally familiar with what's being
24 described on page 19 in section 6.4.2, and if so, can
25 you share that with the jury?

Mr. Lipford - Direct

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1 A Yes, this is kind of a flexible architecture
2 picture of how MMS can be architected in a CDMA2000
3 cellular network. Again, it was designed to be very
4 flexible. If you'll look up in some of the text
5 where it starts about on page -- line five of this
6 document, it says, "For example, some network
7 operators may wish to implement the MMS functionality
8 within the core network," and it references scenarios
9 one and two.

10 Q So stop there if you would.

11 A Uh-huh.

12 Q That say, "Some network operators may wish to
13 implement the MMS functionality within the core
14 network," e.g. scenarios one and two. Do you have an
15 understanding of what the reference to "MMS
16 functionality" is, as someone who worked with this
17 document at the time?

18 A Yes, it would be everything required to provide
19 the capability, so it would be your multi-media
20 messaging server and the elements needed to provide
21 the service.

22 Q Okay. And does this document actually reflect,
23 as an example, scenario two of the MMS functionality
24 being within the core network, and if so, can you
25 point the jury to that?

Mr. Lipford - Direct

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1 A Yes, just down in the diagram where the little
2 circular thing with the "2" in it is it shows the
3 cellular network with the MMSC as part -- where the
4 MMSC could be located. So that would be a very -- a
5 picture of how to implement it within the CDMA2000
6 core network.

7 Q Further down, there's a reference to a scenario
8 five. It starts with the sentence, "And still..."
9 Can you explain what is being described there?

10 A Sure. It says, "And still, some network
11 operators may wish to allow a third party MMS
12 provider to use their network for provisioning MMS."
13 This would allow operators, if they chose, to have an
14 external company or service provider provide the
15 services for them, and this is a pictorial example of
16 what that would look like, so the actual third party
17 service provider is not within the cellular network.

18 Q Last document, Mr. Lipford, DX-7.

19 (Pause in proceedings.)

20 Q Do you recognize DX-7?

21 A Yes, this is a -- again, a multi-media messaging
22 service requirements document. This particular
23 document is an updated version of the document we
24 just looked at, and it is dated from April of 2004.

25 Q And does it at the very end of the document on

Mr. Lipford - Direct

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1 pages 21 and 22 contain the same text and picture
2 that we were just looking at in the prior exhibit,
3 DX-8?

4 A Yes, and section 6.2.2 of ths document is the
5 same text as we were just reviewing in the previous
6 document, and the picture is the same picture.

7 Q Mr. Lipford, are you familiar with Nokia from
8 your standards-related work?

9 A Yes, I've worked with Nokia ever since I started
10 in standards. They're very involved. Their huge
11 focus was the ETCI, or the European GSM standards we
12 talked about earlier. That was where most of their
13 involvement was.

14 Q Have you communicated with Nokia engineers during
15 the course of your work in standards-related bodies
16 over the years, and if so, going back how far?

17 A Oh, yes, I've worked with them since I started in
18 1998. Still work with them today. And, you know, in
19 fact, they provide some of our infrastructure into
20 our networks today, and they're really good
21 engineers.

22 Q Going all the way back to the beginning of your
23 work in standards bodies in 1998 to the present, has
24 anyone at Nokia ever raised any patent infringement
25 concerns with you?

Mr. Lipford - Cross

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1 A No, never.

2 MR. FINKELSON: Your Honor, I have no
3 further questions. Maybe it's an appropriate time --

4 THE COURT: Yes.

5 MR. FINKELSON: -- to break?

6 THE COURT: Yes. We'll take a ten minute
7 recess and then begin the cross-examination of this
8 witness.

9 (Jury out, 11:10 a.m.

10 THE COURT: We're in recess, everyone.

11 MR. FINKELSON: Thank you, Your Honor. So,
12 Mr. Lipford, you can step down and just wait in the
13 witness room.

14 THE COURT: I'm sorry. You can step down.

15 THE WITNESS: Okay.

16 THE COURT: You don't have to stay there.
17 And we'll resume your testimony after the recess.

18 (Recess taken from 11:10 a.m. to 11:27
19 a.m.)

20 THE COURT: Be seated, everyone. You may
21 proceed with cross-examination.

22 CROSS-EXAMINATION

23 BY MR. GOETTLE:

24 Q Good afternoon, Mr. Lipford.

25 A Good afternoon.

Mr. Lipford - Cross

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1 Q It's been a little while. I don't know if you
2 recall. I took your deposition. My name is Dan
3 Goettle. It's nice to see you again.

4 A You too.

5 Q Mr. Lipford, you've never read the patent in suit
6 in this case, right?

7 A No, I've not.

8 Q You've never looked at the claim construction in
9 this -- any claim constructions regarding that patent
10 in this case, have you?

11 A No, I haven't.

12 Q Okay. Do you have any understanding of whether
13 the phrase "core network elements" is of relevant
14 importance to the jury in what they need to decide in
15 this case?

16 A No, I do not.

17 Q Okay. But you did use the term "core" and "core
18 network" a fair amount during your direct
19 examination, right?

20 A Yes, I did.

21 Q Okay. But you meant "core network" within the
22 context of the standards that you were talking about,
23 not in the context of the patent in suit, right?

24 A That is correct.

25 Q You used the term "core network" in the context

Mr. Lipford - Cross

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1 of the standards you were talking about and not in
2 the context of "core network elements" in the Court's
3 construction, right?

4 A That is correct.

5 Q And you have never had occasion to consider
6 whether any core network element of today would
7 qualify of a core network element in a 1999 cellular
8 network?

9 A I'm sorry, say that again. Can you ask that
10 again, please? I apologize.

11 Q You've never had to consider what a core network
12 element is in a 1999 cellular network, have you?

13 A Well, in order to --

14 Q The --

15 A -- define the core network, I would have to know
16 what the core network elements are.

17 Q And you would look to the standards to see what
18 the standards say about it?

19 A Well, I helped write those standards, yes.

20 Q That's a yes, you would --

21 A Yes.

22 Q -- look at the standards?

23 A Yes.

24 Q Okay. But you wouldn't look to the patent that
25 you've never seen before or the Court's claim

Mr. Lipford - Cross

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1 construction that you've never seen before?

2 A Correct.

3 Q Okay. So your testimony with respect --
4 regarding core network is all in the context of these
5 standards and not in the context of the patent?

6 A Correct.

7 Q Okay. You worked on functionality -- this may
8 have before you started your work in the standards
9 organizations. You worked on functionality called
10 interworking function, correct?

11 A Yes, that was just before I started my standards
12 role.

13 Q And Sprint implemented interworking function in
14 its cellular network in 1998?

15 A Yes, we did.

16 Q And that as your work that got -- that's what got
17 implemented in Sprint's network?

18 A Yes, it was.

19 Q That interworking function enabled a Sprint
20 subscriber to use their cell phone to get on the
21 internet?

22 A Yes, it did.

23 Q Sir, you testified a little bit about what
24 standards are for. You referenced how you explained
25 it to your mom, is that right?

Mr. Lipford - Cross

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1 A Yes.

2 Q Okay. And it was a good explanation, but
3 fundamentally, the idea is so that when you take your
4 iPhone into a network it will work?

5 A Yes.

6 Q Okay. And that way, Apple, who was the creator
7 and developer of the iPhone, that way, Apple doesn't
8 have to call Sprint to find out how their network
9 works? They can just look to these standards and
10 decide how to make their iPhone so that it will work
11 in Sprint's network?

12 A Yes.

13 Q So the standards are about defining the
14 interfaces, how one component, like the phone, can
15 talk to another component, like the tower, right?

16 A Yes.

17 Q And it's how a -- one component, like a mobile
18 switching center can be made by one company, and that
19 mobile switching center will know how to talk to, for
20 example, a home location register that's made by
21 another company?

22 A Yes.

23 Q So that the mobile switching center vendor
24 doesn't need to call the HLR vendor and say hey, how
25 do you want to get our systems to work together,

1 right?

2 A Correct.

3 Q Instead, they go to the standards and they
4 develop a creative -- they develop those interfaces
5 according to the standard, and then they're
6 reasonably assured it will work?

7 A Reasonably assured, correct.

8 Q It probably doesn't work smoothly, probably some
9 tweaks, but largely, they rely on the standards?

10 A Yes.

11 Q Okay. And that's the purpose of the standards,
12 right?

13 A Yes.

14 Q It's for inter -- they call that
15 interoperability?

16 A Yes.

17 Q Okay. And Sprint intends to be compliant with
18 standards?

19 A Yes, as a multi-vendor environment, it's
20 imperative that we -- as close as we can.

21 Q Right, because if they deviate from the standard,
22 then when someone -- one of these vendors tries to
23 plug in their equipment it might not work?

24 A Correct.

25 Q So they rely on these vendors to apply the

Mr. Lipford - Cross

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1 standards correctly, and then they know, are
2 reasonably assured, that it will largely work, the
3 cellular network will largely work, when all those
4 network components are plugged together and start --
5 and turn on?

6 A Yes.

7 Q Okay. Now, we're going to -- we're going to go
8 through the documents that you referred to, but one
9 of the documents you referred to was what you called
10 ANSI-41?

11 A ANSI-41, yes.

12 Q And that was the first document that the jury
13 saw?

14 A Yes.

15 Q And you don't know -- that was the one -- that
16 was the earliest one in time, 1997?

17 A Correct.

18 Q And you don't know one way or the other whether
19 Sprint had any involvement in developing that
20 standard?

21 A That was prior to my coming onto the team,
22 correct.

23 Q So you don't know one way or the other whether
24 Sprint had any involvement in developing that
25 standard?

Mr. Lipford - Cross

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1 A Correct.

2 THE COURT: Mr. Goettle, is that DX-3?

3 MR. GOETTLE: It is, sir.

4 THE COURT: Thanks.

5 (Pause in proceedings.)

6 BY MR. GOETTLE:

7 Q And you had zero -- zero involvement in Sprint's
8 implementation of any of the 3GPP2 standards?

9 A Correct, I believe I mentioned that on my direct.

10 Q You had no involvement in -- with the engineers
11 at Sprint who were charged with the responsibility of
12 putting the network together? You had no involvement
13 in them in how they put the network together?

14 A I was not directly involved. Sometimes they
15 would ask questions to help them interpret a standard
16 or what the meaning of the standard was, and then we
17 would provide that interpretation for them.

18 Q And you never had to provide any interpretation
19 with respect to implementing short message service?

20 A Not that I recall, no.

21 Q And you never had to provide any advice or
22 interpretation when Sprint was implementing multi-
23 media service?

24 A No, that would have been a different engineer on
25 our team, on our standards team.

Mr. Lipford - Cross

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1 Q And you have no understanding one way or the
2 other whether he did provide any such
3 interpretations?

4 A No, I do not.

5 Q And, sir, you don't know -- you don't know -- you
6 don't know about Sprint's short -- I'm sorry, you
7 don't know about Sprint's subscriber profile system,
8 SPS?

9 A No, sir, I do not.

10 Q And you don't know about Sprint's short message
11 service center, SMSC?

12 A Not about our specific center, no.

13 Q And you don't know anything about Sprint's multi-
14 media service center, MMSC?

15 A No.

16 Q And you don't even know whether Sprint uses a
17 mobile switching center?

18 A I do not know if we continue to use one. We used
19 to.

20 Q And, sir, you testified on your direct -- and
21 correct me if I'm wrong, but you testified on your
22 direct that there was a separate European standard
23 different from the one that you talked to the jury
24 about?

25 A Yes, the ENCI standard I think you're referring

Mr. Lipford - Cross

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1 to, yes.

2 Q It also could be known as GSM?

3 A The GSM standard, yes.

4 Q Okay. And that's a European standard in your
5 view?

6 A Yes.

7 Q Okay. And then this CDMA standard, which is an
8 outgrowth of ANSI-41, that's what you referred to as
9 the American standard?

10 A Correct.

11 Q And you gave an analogy to the jury about outlets
12 and how outlets in Europe are different than outlets
13 in the U.S., right?

14 A Yes, I did.

15 Q And that would give the impression that you
16 couldn't take your toaster to Europe and plug it in
17 without some sort of adapter, right?

18 A Correct.

19 Q Okay. But there are two of the four carriers in
20 the United States that are implementing that European
21 standard, right?

22 A I believe you're mentioning T-Mobile and AT&T,
23 yes.

24 Q Those are two, right?

25 A That's --

Mr. Lipford - Cross

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1 Q There's only four in the United States, right?

2 A There's many carriers in the United States.

3 Q Okay.

4 A There's four nationwide carriers.

5 Q Thank you. Four nation -- you caught me and --

6 A Yeah.

7 Q -- I was like oh, boy, there are? I --

8 A Yes, there are a lot smaller regional ones.

9 Q Okay. But you referred to them as nationwide?

10 A Yes.

11 Q Okay. Two of the four nationwide carriers are
12 able to plug their toasters in here just fine using
13 the European standard?

14 A They have the technology to call I guess.

15 Q Okay.

16 (Pause in proceedings.)

17 MR. GOETTLE: Okay. Can we put up DX-3,
18 please, Mr. Dyer?

19 (Pause in proceedings.)

20 BY MR. GOETTLE:

21 Q This was the first document that you talked to
22 the jury about, right?

23 A Yes.

24 Q Let's make sure that we understand everything
25 that's going on in this document.

Mr. Lipford - Cross

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1 MR. GOETTLE: Can you -- Mr. Dyer, can you
2 blow up at the top left corner that -- where it says
3 "3GPP?"

4 BY MR. GOETTLE:

5 Q Sir, you see that -- you see where in the blowup
6 on the first page of DX-3 it says "3GPP2N.S?"

7 A Yes.

8 Q Right?

9 A Yeah.

10 Q That S stands for "specification," correct?

11 A Correct. We talked about that in my deposition I
12 think.

13 Q We did, yes. You educated me very well. And the
14 other documents -- and we're going to look at them
15 later -- other document sometimes don't use an S,
16 they use an R?

17 A Correct.

18 Q And that stands for "reference?"

19 A Correct.

20 Q Okay. "Reference," meaning not required?

21 A Correct.

22 Q Okay. For information?

23 A They're informational documents, correct.

24 Q Okay. Okay. And then let's --

25 MR. GOETTLE: Can we -- Mr. Dyer, can you

Mr. Lipford - Cross

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1 just pull up the title?

2 BY MR. GOETTLE:

3 Q And all I wanted to flag in the title is it uses
4 the term "Inter-system Operations," right, in the
5 title?

6 A Yes, it does.

7 Q And that's what we were talking about with the
8 vendors not having to call each other directly. They
9 can just go to this document because it's about how
10 do you get your stuff to work in the inner-system,
11 right?

12 A Yes.

13 Q Okay. And that's the purpose of this document?

14 A Yes.

15 Q Okay.

16 (Pause in proceedings.)

17 MR. GOETTLE: Okay. Can we go to page 1-7?

18 (Pause in proceedings.)

19 MR. GOETTLE: Can you blow up the bottom
20 definition, "network reference model?"

21 BY MR. GOETTLE:

22 Q You showed this definition to the jury, right?

23 A Yes.

24 Q Okay. The definition is for "network reference
25 model," right?

1 A Yes.

2 Q And that's the diagram that you showed to the
3 jury?

4 A Yes.

5 Q Okay. And we're going to look at that, but this
6 says under "network reference model," this is the
7 definition, "The functional entities and the
8 associated interface reference points that may
9 logically comprise a cellular network," right?

10 A Yes, it is.

11 Q Okay. So let's put down a couple markers on
12 this. First of all, it's talking about function,
13 functional entities, right?

14 A Yes, it is.

15 Q Okay. So it's saying these are the functions
16 for -- the last two words in that are a "cellular
17 network?"

18 A Yes.

19 Q The functions for a cellular network, right?

20 A Yes.

21 Q Okay. And then there's an important word in
22 there. It says -- towards the end it says -- of the
23 top line it says "that may logically comprise a
24 cellular network," right?

25 A Yes, it does.

Mr. Lipford - Cross

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1 Q And that is saying may or may not, correct?

2 A Correct.

3 Q Okay. So putting it together, a network
4 reference model in this document, DX-3, is laying out
5 the functions that may comprise a cellular network?

6 A Yes.

7 Q Okay. So let's go to 1-24.

8 (Pause in proceedings.)

9 MR. GOETTLE: And just like before, can you
10 blow up the five down through figure two?

11 BY MR. GOETTLE:

12 Q Okay. So now I'm showing you what's on 1-24 of
13 DX-3. This is the network reference model?

14 A Yes, it is.

15 Q Okay. Okay. And we see in that first sentence,
16 it -- now it's saying figure two presents, but after
17 that, it's the same definition, right?

18 A Yes.

19 Q Okay. So -- just so there's no confusion, Mr.
20 Lipford, when you look at this diagram and see those
21 boxes, those are not hardware, that is not equipment,
22 those boxes are its functions, right?

23 A They could be both because they're -- it takes
24 equipment to do the function.

25 Q Certainly. They could be both. But it's -- this

Mr. Lipford - Cross

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1 diagram is not to be read as if all of these are
2 separate computers talking to each other, right?
3 Because these are just boxes around functions, right?

4 A Yes.

5 Q Okay. And we can't assume even though the -- it
6 says figure two presents the functional entities that
7 may comprise a cellular network, we can't just look
8 at this diagram and accept that everything in here is
9 a function of a cellular network, right?

10 A Well, as I testified, there are two functions
11 that are not part of the cellular network.

12 Q Right.

13 A Right.

14 Q So the devil is in the details, right? Could be?

15 A It's in -- you know, in the hands of the experts
16 that helped develop the document and use the document
17 for interpretation.

18 Q You have to know more than just going to this
19 document and starting to point at it? You have to
20 apply -- you have to apply some knowledge, right?

21 A This is the starting point recommendation to the
22 engineers.

23 Q Okay. And maybe I should back up and we should
24 explain what we're talking about and make sure it's
25 clear.

1 A Okay.

2 Q The PSTN, that's the wired phone system?

3 A Yes.

4 Q Okay. And the ISDN, what is that?

5 A That is called the integrated services digital
6 network. It's a data network. It's also a protocol
7 which in my experience, as we discussed in my
8 deposition, was used for communicating between two
9 endpoints. So I worked with it as a protocol. It
10 can also -- it's also cons -- you know, is a network.

11 Q And, certainly, it would not be part of a
12 cellular network?

13 A No, it would not be.

14 Q Okay. So you can't just look at this diagram
15 and -- really, you can't read the first sentence in
16 this diagram and assume everything that is in there
17 is part of a cellular network?

18 A It would take someone skilled in the technology,
19 yes.

20 Q Yes. And, by the way, this diagram is intended
21 to be informative for the reader, correct?

22 A It is an informative document, yes.

23 Q It is not a requirement?

24 A It is a recommended starting point or guidelines,
25 but it is not a mandatory requirement.

Mr. Lipford - Cross

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1 Q Well, you inserted the word "recommended," but I
2 thought we already established that what this diagram
3 is and what the network reference model is per its
4 definition is showing the functions that may comprise
5 a cellular network.

6 A It may, and because they are defined in this way,
7 and I think there is actually words in here that says
8 "recommends" --

9 Q There's words in here that say "recommend?"

10 A It's either this one or the next version of the
11 document I believe it is, the PX-4.

12 Q Well, how about this one?

13 A I would have to spend some time studying it.

14 Q You don't know sitting here today?

15 A Not sitting here today.

16 Q And you did prepare for this testimony today,
17 right?

18 A Yes.

19 Q Okay.

20 (Pause in proceedings.)

21 MR. GOETTLE: Okay. And let's -- let's go
22 to the next page. And can you blow up the definition
23 of "message center?"

24 BY MR. GOETTLE:

25 Q By the way, I want to make sure -- I forgot to

Mr. Lipford - Cross

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1 ask you a question. I want to make sure that your
2 direct testimony is absolutely clear for this jury.
3 Does this document anywhere refer to "hardware," the
4 word "hardware?"

5 A Not to my knowledge.

6 Q Okay. And, again, that's consistent with what we
7 were talking about? It's talking about the
8 functions?

9 A Correct.

10 Q Right?

11 A Yeah.

12 Q Okay. And this is the definition of "message
13 center" that you read to the jury, correct?

14 A Yes.

15 Q Okay. "Message center," those words do -- are
16 not the same words as "messaging server," are they?

17 A They are not the same words.

18 Q Okay. So if a patent is talking about "messaging
19 server," you would be best served to go to the patent
20 to find out what it means by a "messaging server?"

21 A That would seem to make sense.

22 Q Yeah, it would make total sense, right? Okay.

23 And if the Court has construed messaging --

24 THE COURT: You have to -- you have to give
25 a verbal answer.

Mr. Lipford - Cross

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1 THE WITNESS: Oh.

2 MR. GOETTLE: Oh, I'm sorry. I'm sorry.

3 THE WITNESS: Yes, it does make sense.

4 MR. GOETTLE: I apologize.

5 THE WITNESS: Yes.

6 THE COURT: The witness nodded, didn't say
7 anything.

8 MR. GOETTLE: Oh.

9 THE COURT: And you assumed he said yes.

10 MR. GOETTLE: I did.

11 THE COURT: But the record will show
12 nothing.

13 MR. GOETTLE: Yes, that was --

14 THE COURT: He just answered the question.

15 MR. GOETTLE: Yes.

16 THE COURT: Now you may proceed.

17 MR. GOETTLE: Thank you, sir.

18 BY MR. GOETTLE:

19 Q And if the Court has construed "messaging server"
20 under a patent, the interpreter or someone who might
21 have to be applying that patent to find out if
22 there's infringement would be best served to look at
23 the Court's construction of "messaging server" and
24 not look at this document's definition of "message
25 center," right?

Mr. Lipford - Cross

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1 A Yes.

2 Q Okay. And in this definition of "message center"
3 it does define -- the first part says, "The MC,"
4 which is the message center, "is an entity that
5 stores and forwards short messages," right?

6 A Yes, it does.

7 Q Okay. That definition says nothing about sending
8 an inquiry?

9 A No, it does not.

10 Q And let's go back to our -- to our discussion
11 about functions. Let's look at the definition of
12 "home location register."

13 A Okay.

14 Q Okay. I want to go to the --

15 MR. GOETTLE: Can you highlight the second
16 sentence that starts, "The HLR...?" The second
17 sentence, sorry. The middle sentence.

18 (Pause in proceedings.)

19 BY MR. GOETTLE:

20 Q That sentence that just got highlighted in the
21 definition of "home location register" in DX-3 reads,
22 "The HLR may or may not be located within and be
23 indistinguishable from an MSC." Did I read that
24 right?

25 A Yes.

Mr. Lipford - Cross

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1 Q Okay. And that go -- that, again, supports this
2 notion of function. You can have your HLR function
3 and your mobile switching center function, MSC
4 function, in the same computer? They can be mashed
5 together, right?

6 A They can be.

7 Q Okay. And it actually -- it includes that
8 language and other definitions in here as well. Do
9 you want me to point you to them? How about VLR,
10 visitor location register, which is on the next page?

11 (Pause in proceedings.)

12 Q And we see in the middle sentence there, do you
13 see that, sir, it says, "The VLR may or may not be
14 located within and be indistinguishable from an MSC?"
15 Do you see that?

16 A Yes, I see that.

17 Q Okay. And the visitor location register, you
18 could -- it's safe to kind of think of that as sort
19 of like a home location register when you're on the
20 road? Is that safe?

21 A It would be of your serving MSC or serving VLR.

22 Q Okay. And it's storing subscriber information?

23 A Yes.

24 Q And the -- and the mobile switching center would
25 rely on the visitor location register in order to,

Mr. Lipford - Cross

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1 you know, get information?

2 A That would be one place it would rely on, yes.

3 Q So then, sir, under this standard, it was very
4 common back in 1997 time frame to think of these
5 functions that are defined in here as functions, and
6 a skilled artisan would know you can combine these
7 functions in virtually any way you want?

8 A Yes.

9 Q Okay.

10 (Pause in proceedings.)

11 MR. GOETTLE: Okay. Can we -- can we go to
12 DX-4?

13 BY MR. GOETTLE:

14 Q This was another document that you looked at with
15 counsel on your direct examination?

16 A Yes, it was.

17 Q Are you -- I'm not trying to rush you. Are you
18 caught up?

19 A Yeah, yeah, that's fine. I'll work from this.
20 That's too much paper to turn.

21 Q Okay.

22 MR. GOETTLE: Can we do the same thing?
23 Can you blow up the top corner?

24 (Pause in proceedings.)

25 BY MR. GOETTLE:

Mr. Lipford - Cross

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1 Q Okay. So here, we have what's blown up for DX-4
2 in the top corner, it says "3GPP2S.R." Do you see
3 that?

4 A Yes.

5 Q Okay. And that R means "reference?"

6 A Correct.

7 Q Which means informative?

8 A Correct.

9 Q It's not to be taken as meaning required? That
10 is not what R stands for?

11 A Correct.

12 Q Which certain lay lawyers might think that's what
13 R stands for when they're taking a deposition?

14 A Yes, I think we had that discussion.

15 Q Okay. Now let's go to -- let's go to page three.

16 (Pause in proceedings.)

17 Q Okay. And the -- and you showed this to the jury
18 on your direct examination, what I'm showing here on
19 the screen?

20 A Yes.

21 Q Okay. And I think you testified -- and correct
22 me if I'm wrong, but I think you testified that
23 everything in the dotted line that runs around,
24 everything in there is the core network?

25 A Yes, that -- when we were working back in -- what

Mr. Lipford - Cross

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1 was this -- 1999, we would use the terms
2 interchangeably.

3 Q You would use the terms "core network" and
4 "collective entity" interchangeably?

5 A Yes.

6 Q Okay. And -- but you did -- you did testify that
7 the document nowhere refers to the word "core," let
8 alone "core network," let alone even further "core
9 network elements?"

10 A Correct.

11 Q No reference in this document to "core network
12 elements?"

13 A No.

14 Q And no reference in the first document we looked
15 at, which I don't know if the jury got the sense,
16 which is like 1,500 pages long, no reference in there
17 about "core," "core network," or "core network
18 elements?"

19 A Not to my knowledge.

20 Q Okay. And what we're seeing in this dotted line
21 here, according to you, sir, is the core network of a
22 3GPP2 wireless network?

23 A Yes.

24 Q Okay. 3GPP2 equals CDMA2000 for -- right?

25 A Yes.

Mr. Lipford - Cross

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1 Q Okay. CDMA2000 is Sprint's network?

2 A Yes.

3 Q Okay. So when we see 3GPP2 in these documents we
4 can be thinking this is CDMA2000 network like
5 Sprint's?

6 A Yes.

7 Q So is it your testimony, sir, today that
8 everything in this dotted line that Sprint implements
9 is part of Sprint's core network of its 3 -- of its
10 3GPP2 wireless network?

11 A Yes. I think we did mention that the composite
12 of the BS, that it could be inside or outside. It
13 depends on how it would be implemented by the
14 vendors. But yes, everything inside of this would be
15 part of our core -- CDMA2000 core network.

16 Q So now we have yet another instance where you
17 can't just look at the diagram and know what it
18 means, right?

19 A Not to the layperson, no.

20 Q Not to the layperson.

21 MR. GOETTLE: Can you -- can you pull up
22 what's that kind of shaded box inside -- actually, I
23 just -- hold on, I'll put an arrow on it.

24 (Pause in proceedings.)

25 MR. GOETTLE: That shaded box right there.

1 BY MR. GOETTLE:

2 Q This part is inside the collective entity in this
3 document, right?

4 A Yes, it is.

5 Q And that part is the cellular tower and the
6 specialized computer that hangs on the tower that
7 controls the tower?

8 A As well as the equipment that controls that tower
9 and the equipment at that tower, or the BSC, yes.

10 Q Okay. So -- and you're saying that somehow a
11 skilled artisan would know well, that -- even though
12 it's within the dotted line going around the box, a
13 skilled artisan would know that part is not included?

14 A I didn't say it was not included. There are
15 cases where it may not be included.

16 Q How about in Sprint's network?

17 A There are cases I believe where it may not be
18 included. It depends on the vendor's implementation
19 of the BS function.

20 Q So are you testifying today that the cellular
21 network antennas in Sprint's network are part of
22 Sprint's core network?

23 A No, sir, I did not say that.

24 Q Okay. I'm not following what you are saying.
25 Are you saying that in Sprint's network, the bay

Mr. Lipford - Cross

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1 station controllers are within Sprint's core network?

2 A There are I believe -- and, again, I didn't do
3 implementation, so I can't state for a fact for the
4 Court, so I'd prefer not to answer --

5 Q That's fine.

6 A -- that question.

7 Q "I don't know" is a certainly fine answer, sir --

8 A Yeah.

9 Q -- if that's your answer.

10 A Yeah.

11 Q Okay. Sir, I didn't think the question and
12 answer during your direct was abundantly clear on
13 this point. Are you saying that everything within
14 this dotted line is part of a CDMA cellular network,
15 not a wireless network, a cellular network?

16 A Everything within the dotted line would be part
17 of the CDMA cellular network.

18 Q Just to make that --

19 A You would add the mobile station to complete the
20 picture.

21 Q Let me try it again. Maybe I missed my question.

22 A Okay.

23 Q I think I did. Every - is it your testimony that
24 everything in that dotted line is part of the core
25 network of a CDMA cellular network?

Mr. Lipford - Cross

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1 A Yes, and I would caveat that with the composite
2 of the bay station may or may not be realized that
3 way depending on implementations.

4 Q And that we have just talked about?

5 A Right.

6 Q Okay. But that bay station, BTS and BCS, that
7 bay station system though was included in the network
8 reference model that we looked at in DX-3, right?

9 A Yes.

10 Q Okay. So, sir --

11 MR. GOETTLE: Can you turn to -- can you go
12 back to the previous page and blow up the paragraph
13 under two reference models?

14 (Pause in proceedings.)

15 MR. GOETTLE: Yeah, actually, these --

16 (Pause in proceedings.)

17 MR. GOETTLE: Yeah, back one page, sir.
18 There you go. Can you blow up the number two at the
19 top and then the paragraph right under it?

20 BY MR. GOETTLE:

21 Q Sir, do you see that the heading here is "2.
22 Reference Models," plural?

23 A Yes.

24 Q Okay. And then under that, there's a paragraph
25 that says, "Reference models are a graphical tool

1 used to visualize structure and describe certain
2 complex subjects."

3 A Yes.

4 Q Oh, I just read the rest of that and I thought
5 boy, what's my point?

6 MR. GOETTLE: Can we go back and go to the
7 next paragraph down, 2.1?

8 BY MR. GOETTLE:

9 Q In the first paragraph there under 2.1, it says,
10 "Figure 2.1," which is the figure we were just
11 looking at with the dotted line around it, "Figure
12 2.1 presents the network entities and associated
13 reference points that comprise a wireless network."
14 Do you see that?

15 A Yes.

16 Q Okay. Juxtapose that to what we looked at before
17 in DX-3 where it says it was a network reference
18 model for a cellular network, right?

19 A Yes. Okay.

20 Q Okay. Different words, right?

21 A Yes.

22 Q Okay. And then in the last sentence in this
23 paragraph it says, "The network reference model in
24 this document is a compilation of several reference
25 models currently in use in 3GPP2 wireless

Mr. Lipford - Cross

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1 recommendations." Do you see that?

2 A Yes.

3 Q So figure two is a compilation of various
4 different network reference models?

5 A Yes.

6 Q Right? So when we look at figure two and what's
7 in that dotted line around the collective entity and
8 are trying to figure out why it has so much more
9 stuff in it than the network reference model we
10 looked at in DX-3, it's because it's included other
11 reference models, and that's why it's called a
12 wireless reference model and not a cellular reference
13 model, right?

14 A No, it's a wireless reference model because
15 everything that 3GPP2 does is wireless. It is the
16 CDMA2000 wireless technology, so it would be a
17 wireless reference model.

18 Q So in your opinion then, or your testimony is
19 that there's no distinction to be made between
20 cellular and wireless?

21 A In the case of these documents that we're looking
22 at that I've testified to, a wireless would be the
23 same as CDMA2000 or ANSI-41 CDMA2000 technology.

24 Q I just want to make sure you're answering the
25 question I'm asking. I'm not saying you're not --

Mr. Lipford - Cross

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1 A Okay.

2 Q -- but I want to make sure you're clear.

3 MR. GOETTLE: Actually, why don't we put
4 them up side by side? So can you put up the next
5 page on here with the dotted line around it? And can
6 you put up DX-3 on -- next to it at page 1-24?

7 (Pause in proceedings.)

8 MR. GOETTLE: And can you blow up the same
9 way you had before? Oh, sorry, can you include the
10 paragraph above?

11 (Pause in proceedings.)

12 MR. GOETTLE: I'm sorry, Mr. Dyer, can you
13 just get a little bit more on the busier slide -- the
14 busier side? I want to see the figure 2.1 below.
15 Thank you. Sorry.

16 BY MR. GOETTLE:

17 Q Okay. So what we have on the left is the network
18 reference model from DX-3 that we talked about
19 earlier, right?

20 A Yes.

21 Q A network reference model for a cellular network?

22 A Yes.

23 Q Okay. And then on DX-4 on the right, we have a
24 network reference model at least in here it says for
25 a wireless network, right?

Mr. Lipford - Cross

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1 A Yes.

2 Q Okay. And we see that the -- what you call the
3 core network has vastly expanded in the period of two
4 years, right?

5 A Yes.

6 Q Okay. What's core -- what does "core" mean in
7 "core network" to you?

8 A In a wireless network it would be the entities
9 that are the switching, the IP, the messaging, the
10 services, it's the non-RF portions of it. So you
11 would have the radio network and the core network, or
12 the CDMA core network.

13 Q Okay. So it's basically everything in the
14 figures that don't relate to the RF interface?

15 A Yes.

16 Q Okay. Which means everything in the figures that
17 doesn't relate to the phone and the power?

18 A Yes.

19 Q Everything else is a core network element?

20 A Well, we did talk about the PSTN, the ISDN, and
21 those -- where you connect to other networks, those
22 entities --

23 Q Not included?

24 A -- not being part of the CDMA core network.

25 Q But everything else is core in your view?

Mr. Lipford - Cross

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1 A Yes, the things in the dotted line.

2 Q Okay. Actually, and then when you compare these
3 diagrams we see that there are -- just to put -- just
4 to finalize this, they're -- in addition to what's
5 shown in the cellular network reference model on the
6 left, what's added in the wireless network reference
7 model on the right is the box that says "IP" at the
8 top. Do you see that?

9 MR. GOETTLE: Can you highlight these as I
10 go?

11 BY MR. GOETTLE:

12 Q Next to that is the box that says -- I think it
13 says "SCP?"

14 A Uh-huh.

15 Q Next to that is a box that says something else.
16 I can't read it. "SN" I think, right? That's not
17 included in the cellular reference model.

18 A The one on the left?

19 Q Yeah, I can't read the letters on it.

20 A Right.

21 Q "SN," okay. And then --

22 A Yeah.

23 MR. GOETTLE: Can you go back?

24 BY MR. GOETTLE:

25 Q And then we have below the "IP" box, we have the

Mr. Lipford - Cross

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1 box labeled "NPDB." That's now core. Wasn't needed
2 to describe the cellular network in 1997, but in
3 1999, that's now core, right, according to you?

4 A Yes.

5 Q Okay. And then we have the box in the bottom,
6 right that says "OTAF." That's now core in 1999 and
7 it wasn't core in 1997, right?

8 A Correct.

9 Q Okay.

10 (Pause in proceedings.)

11 MR. GOETTLE: And now, Mr. Dyer, can you
12 leave up what you have on the right and bring up
13 DX-5?

14 BY MR. GOETTLE:

15 Q Okay. You looked at DX-5 on your direct
16 examination?

17 A Yes.

18 Q Okay. And this is the version -- the next
19 subsequent version of what we're looking at on the
20 right?

21 A It's revision B, yes.

22 Q Okay. So this one comes a little bit later in
23 time?

24 A Yes.

25 Q In fact, this is in 2001?

Mr. Lipford - Cross

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1 A Yes.

2 Q Okay. And where is the -- the version on the
3 right is 1999?

4 A Yes.

5 Q Okay. So this is two years later?

6 A Yes.

7 MR. GOETTLE: Okay. Can you go to the same
8 diagram in there? It's page nine I think. Yeah.

9 BY MR. GOETTLE:

10 Q Okay. Now we see that the core -- the core
11 network -- core network has expanded again in just
12 two years. Now we have added on the -- on the left-
13 hand side towards the top there's a box called
14 "LPDE." That's not -- do you see it right below
15 where you are? Nope. Yep.

16 THE COURT: What figure is shown on the
17 left side of the screen?

18 MR. GOETTLE: That is, sir -- that is
19 figure 2.1 of DX --

20 THE COURT: Of DX-5?

21 MR. GOETTLE: Yes, sir.

22 BY MR. GOETTLE:

23 Q We also have more core network elements added.
24 We have a "VMS" right next to where you -- right next
25 to the "LPDE." Do you see that, sir?

Mr. Lipford - Cross

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1 A Yes.

2 Q That stands for "voicemail system?"

3 A You might have to look at the thing, but I'll
4 assume you -- it does.

5 Q Okay. So now voicemail systems are now essential
6 components of a cellular network, right, as of -- as
7 of 2001?

8 A Yes.

9 Q Okay. And then below, on the left we have a new
10 box called "PCF."

11 MR. GOETTLE: Keep going down. Yep.

12 BY MR. GOETTLE:

13 Q Right?

14 A Yes.

15 Q Okay. So that's now core, right?

16 A Yes, it is.

17 Q Okay. And then if you go down to the other side
18 towards the bottom, there's a box called "PDE" and
19 "MPC" that were not included before.

20 (Pause in proceedings.)

21 Q Do you see those, sir?

22 A Yes, I do.

23 Q So the core network of a cellular network has
24 just expanded again in the space of two years with
25 five more functional entities?

Mr. Lipford - Cross

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1 A Yes.

2 Q Okay.

3 MR. GOETTLE: Okay. We can erase all that.

4 Can we go to DX-8?

5 (Pause in proceedings.)

6 BY MR. GOETTLE:

7 Q By the way, while we're looking at these
8 functional entities, does the standard describe that
9 for a cellular network to be implemented according to
10 standard, you look at the geographic implementation,
11 where those functions are implemented?

12 A Just the standard specify geographical
13 information for --

14 Q Does the standard require that to implement a
15 cellular network according to this standard that
16 geography matters?

17 A No.

18 Q Does geography have anything to do with what is
19 part of a cellular network?

20 A No.

21 Q Does geography have anything to do with
22 whether -- in determining whether one element is --
23 let me rephrase the question, if you don't mind.
24 What about relative geography? Does the standard
25 matter -- does the standard specify anything about

Mr. Lipford - Cross

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1 determining whether one element is part of a cellular
2 network, you look at how close it is to another
3 element of the cellular network?

4 A There are cases and standards where delay does
5 play a role in how to specify something, and distance
6 equals delay in some cases. It doesn't expressly use
7 the term "distance." It just says what the delay
8 requirements may be.

9 Q So it will -- in the -- I see. You're saying it
10 will indirectly talk about distance because it's
11 talking about how fast signals need to get from one
12 component to another?

13 A Correct.

14 Q Okay. But you didn't talk about any of that on
15 direct with respect to these exhibits?

16 A No, these exhibits we did not.

17 Q No, because it's not in these exhibits?

18 A No.

19 MR. GOETTLE: Okay. Can you blow up the
20 top corner on this one?

21 (Pause in proceedings.)

22 BY MR. GOETTLE:

23 Q Sir, do you see in the top here we have another
24 R, "R0064?"

25 A Yes.

Mr. Lipford - Cross

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1 Q "Reference," right?

2 A That is a reference document.

3 Q Informative, right?

4 A Correct.

5 Q Okay. So down below where you on direct were
6 talking about the stage one requirements, this is --
7 confusingly, for some reasons, but this is for
8 reference, right?

9 A A requirements document is a reference document,
10 yes.

11 Q Not require, right?

12 A No.

13 Q So, confusingly, a document that is called "Stage
14 One Requirements" is actually not required?

15 A Correct.

16 Q Okay.

17 (Pause in proceedings.)

18 MR. GOETTLE: Okay. And then let's go to
19 the last page.

20 THE COURT: What page is that?

21 MR. GOETTLE: I'm sorry, it's page 19.

22 BY MR. GOETTLE:

23 Q This is entitled "6.4.2 MMS System Architecture
24 Flexibility." Do you see that?

25 A Yes, at the top of the page.

Mr. Lipford - Cross

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1 Q Okay. And you've read -- I know you read
2 portions of this on your direct, but you've read this
3 paragraph?

4 A Yes, I have.

5 Q You know what it's getting at, right?

6 A Yes.

7 Q It's saying you figure out how to implement it.
8 We're going to be flexible and you'll still be
9 standards compliant?

10 A It's explaining the different ways that you can
11 implement it based on your needs, yes.

12 Q And one of those ways is for the network
13 operator, which would be, for example, Sprint, right?
14 Sprint is a network operator?

15 A Yes, we are.

16 Q Okay. In the scenario five that you talked
17 about, which is the second to last sentence -- let me
18 just read it. It says, "And still some network
19 operators may wish," which I think must mean "wish,"
20 is that right? That's a typo?

21 A Yes, I would think so.

22 Q Okay. It says, "And still some network operators
23 may wish to allow a third party MMS provider to use
24 their networks for provisioning MMS." Do you see
25 that?

Mr. Lipford - Cross

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1 A Yes.

2 Q Okay. And that -- what that's saying is you can
3 have an -- a multi-media service center outside
4 this -- external to the cellular network and be
5 compliant with the standard?

6 A Yes, it gives you that flexibility.

7 Q And you've heard of Sprint's old service called
8 Picture Mail, right?

9 A I'm aware of it, yes.

10 Q And that's exactly the scenario with Picture
11 Mail?

12 A I wasn't in charge of the implementation. I
13 can't say for sure.

14 Q You don't know any -- you don't know any -- one
15 way or the other about Picture Mail?

16 A I mean I wasn't involved in the engineering of
17 it, so I would not want to go on record as to the
18 specifics of it. I've talked to people, but I have
19 not -- I haven't seen the direct design or anything.

20 Q So let me ask you this. During the picture mail
21 days, did Sprint host the MMSC?

22 A As I mentioned, I wasn't involved --

23 Q You don't know.

24 A -- in the implementation.

25 Q Okay.

Mr. Lipford - Redirect

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1 (Pause in proceedings.)

2 Q I had forgotten you also looked at DX-7 on
3 your -- did you look at DX-7 on your direct? I have
4 it in my folder. I guess you did?

5 A I did.

6 Q Okay. Same as what we just looked at?

7 A It's an updated version.

8 Q Okay. All right. Thank you.

9 MR. GOETTLE: No further questions.

10 (Pause in proceedings.)

11 REDIRECT EXAMINATION

12 BY MR. FINKELSON:

13 Q Mr. Lipford, counsel for Comcast was just asking
14 you some questions with respect to geography and
15 whether that matters or not.

16 A Yes.

17 Q Were your answers with respect to those questions
18 specific to the standards?

19 A Yes. Yes.

20 Q Because the standards is where your experience
21 is?

22 A Yeah, I deal with the standards. What we do,
23 that's another group of experts.

24 Q Do you know anything about Sprint's actual
25 implementation?

Mr. Lipford - Recross

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1 A No.

2 Q Do you know anything about whether geography
3 matters at Sprint when it comes to how it has
4 actually deployed certain components either inside or
5 outside of the cellular network?

6 A No, I do not.

7 MR. FINKELSON: No further questions.

8 Thank you, Mr. Lipford.

9 MR. GOETTLE: Very brief. I just want to
10 make sure this point is very clear, Your Honor, but I
11 don't need to --

12 THE COURT: No, you may. You may.

13 RECROSS-EXAMINATION

14 BY MR. GOETTLE:

15 Q Sir, if you were ever asked to evaluate Sprint's
16 network to determine whether it was standards
17 compliant, would geography -- with respect to these
18 standards in front of you, would geography play any
19 role in that determination?

20 A No.

21 THE COURT: That concludes your testimony.

22 Thank you very much.

23 (Witness excused.)

24 THE COURT: The witness asked whether he
25 could leave. Mr. Lipford?

Mr. Wilson - Direct

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1 MS. SIMPSON: He may leave.

2 THE COURT: Fine. You may.

3 MS. SIMPSON: Sprint would like to call Mr.
4 Patrick Wilson.

5 (Pause in proceedings.)

6 PATRICK WILSON, Defendant's Witness, Sworn.

7 COURTROOM DEPUTY: Please be seated.

8 Please state your full name and spell it for the
9 record.

10 THE WITNESS: Sure, it's Patrick David
11 Wilson, W-I-L-S-O-N.

12 DIRECT EXAMINATION

13 BY MS. SIMPSON:

14 Q Good afternoon, Mr. Wilson.

15 A Good afternoon.

16 Q Could you please introduce yourself to the jury?

17 A Sure. My name is Patrick David Wilson. I'm an
18 engineer at Sprint. Born and raised in Ohio.
19 Currently live in Colorado. Married, three kids, all
20 middle school age.

21 Q And what is your current position at Sprint?

22 A My current position is I'm an engineer at Sprint.
23 I had several different positions throughout Sprint,
24 but the majority of them being an engineer.

25 Q And what's your current title?

Mr. Wilson - Direct

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1 A My current title is -- I lead special projects.
2 Special projects are those -- we kind of work with
3 the Apples, the Samsungs of the world, with those
4 device manufacturers, and we do things special for
5 them that we kind of don't want the public to know in
6 anticipation of say a device launch, something like
7 that, the next cool phone.

8 Q Can you please tell the jury how you first became
9 involved in telecommunications?

10 A Sure. Went to college at Mount Union College in
11 Ohio. My undergrad was international business
12 economics and French, nothing really computer-
13 related. But throughout my studies, I always found
14 myself kind of being drawn to the computer side of
15 things. So after I graduated, I started to pursue a
16 Master's in Computer Information Systems. At that
17 same time I actually had to get a full-time job to
18 pay for that master's, so I took a job with a
19 software development company. I would say those two
20 things together, you know, working on my master's and
21 also working for a software development company that
22 kind of pushed me down that career path towards the
23 telecommunications industry.

24 Q And where did you get your master's degree?

25 A I got my master's degree in 2000 from the

Mr. Wilson - Direct

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1 University of Colorado. I was -- it was a Master's
2 in Computer Information Systems. Basically, it
3 taught you the end to end life cycle of how to
4 develop an application, you know, how you capture the
5 requirements, how you design the system, how you code
6 the system, how do you architect the database behind
7 the system, and, ultimately, how do you deploy a
8 system and maintain a system.

9 Q What was your first position at Sprint and when?

10 A I was hired in Sprint roughly early 2000. Again,
11 I was an engineer at the time. That was my first
12 position at Sprint.

13 Q Okay. And then after that, what were your other
14 positions at Sprint?

15 A So yeah, largely an engineer through most of my
16 time. I've had several promotions, but largely an
17 engineer. I was also a manager for a period of time
18 as well, so -- but largely an engineer. And I would
19 say my -- you know, as it pertains to why I'm here
20 today, I was the lead design engineer over Sprint's
21 SMS and MMS systems. That was -- I was the lead
22 engineer roughly from 2002. It kind of coincided
23 with the birth of my firstborn. That's kind of why I
24 remember it well. And lasted up until -- in that
25 position up until about 2011-2012, so just about a

Mr. Wilson - Direct

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1 decade being the lead engineer over the SMS and MMS
2 development at Sprint.

3 Q Have you heard of Syniverse Picture Mail?

4 A I have.

5 Q Okay. Could you tell us what that is?

6 A Sure. The Syniverse Picture Mail platform is
7 what we called it, Syniverse Picture Mail product.
8 It was -- it was basically MMS servers. And what we
9 did early on is that was an outsourced system. It
10 was an application that was provided by the company
11 called Syniverse. And what that means is they kind
12 of controlled everything. They built a product, they
13 sold that product to Sprint, completely outsourced
14 outside of our core network, and it provided MMS
15 services at the time. So that was the Syniverse
16 Picture Mail platform.

17 Q And what was your specific role with respect to
18 Syniverse Picture Mail?

19 A Sure. Even though it was outsourced off of our
20 network, I was still the technical point of contact
21 for -- you know, within Sprint to Syniverse from a
22 network perspective. So I worked directly with
23 Syniverse as the point of contact.

24 Q So you mentioned about 2012 you switched
25 positions into your current position as --

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1 A I did.

2 Q -- Special Projects?

3 A I did.

4 Q Okay. And why did you change your position?

5 A It was a promotion. So at the time, like I said,
6 I had been working on the SMS and MMS systems for
7 roughly a decade. I was presented the promotion, the
8 opportunity to either become the manager over the
9 messaging systems, or at the same time I could
10 become -- it wasn't really a manager, but it was a
11 new position that we were starting. It was called
12 Special Projects, and one that reported directly to
13 my director. And, again, Special Projects being, you
14 know, those fancy, secret projects, working with
15 Apple, working with Samsung, trying to figure out
16 what the next cool phone was going to do and making
17 sure, more importantly, it worked on the Sprint
18 network. So, again, I kind of felt like I had been
19 managing the messaging systems for a decade anyway,
20 so I decided to take the Special Projects role. It
21 seemed more interesting at the time.

22 Q Do you still keep track of messaging?

23 A I do. It's kind of like one of those -- you
24 know, it was your baby for a long time, for ten
25 years, so it's hard not to -- you know, just

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1 completely let it go. But I do realize that I'm no
2 longer the lead engineer over messaging. So even
3 though the projects I work on now, so say with Apple
4 or with Samsung, still do touch messaging, right, I
5 defer all those design decisions to my successor,
6 that being Sean Hoelzle. He's now the lead over
7 those systems so --

8 Q I'd like to show you some exhibits, but I realize
9 there's a huge binder in front of you from the last
10 witness.

11 A There is a big binder, yes.

12 Q So let me move that.

13 MS. SIMPSON: Your Honor, may I approach
14 the witness?

15 THE COURT: Yes, you may.

16 (Pause in proceedings.)

17 MR. FINKELSON: That would have made for an
18 interesting exam (indiscernible).

19 THE WITNESS: Yes.

20 (Pause in proceedings.)

21 THE WITNESS: Thank you.

22 (Pause in proceedings.)

23 BY MS. SIMPSON:

24 Q Thankfully, this is a much smaller binder.

25 A Yes. I'm glad about that, yes.

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1 Q Okay. So I'd like to take you back in time, and
2 let's look at DX-21, if we could.

3 A Sure.

4 Q I think it's the first tab there.

5 A Okay. I have it.

6 Q Okay.

7 MS. SIMPSON: At this time could I move all
8 of the exhibits into evidence? I don't believe
9 there's an objection.

10 MR. GOETTLE: No objection, Your Honor.

11 MS. SIMPSON: Okay.

12 THE COURT: What exhibits exactly?

13 MS. SIMPSON: Oh, let me identify.

14 THE COURT: How many are there?

15 MS. SIMPSON: There are four.

16 THE COURT: All right.

17 MS. SIMPSON: And for the record, it's
18 DX-21, DX-209, DX-214, and DX-229.

19 THE COURT: Those exhibits are received.

20 (Defendant's Exhibits 21, 209, 214, and
21 229, documents, are admitted into evidence.)

22 BY MS. SIMPSON:

23 Q So have you seen DX-21 before?

24 A DX-21 or -- oh, yeah, sorry, wrong tab. DX-21,
25 yes, I have. This is an email from Kristi

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1 Buckendahl. Kristi Buckendahl was a project manager
2 on the messaging team. It's an email sent from her
3 to myself on November 14th, 2011.

4 Q Okay. And what does --

5 THE COURT: Keep your voice up.

6 THE WITNESS: Okay.

7 BY MS. SIMPSON:

8 Q What does the document describe?

9 A Sure. So the document -- it kind of outlines a
10 couple different projects that I had visibility to
11 being the lead over the SMS and MMS systems. In
12 particular, this email towards the bottom speaks to
13 the Syniverse Picture Mail replacement project.

14 Q Okay. And what was your role with respect to
15 that project?

16 A Sure. My role in the Syniverse Picture Mail
17 replacement project was, again, I was the -- I was
18 the design lead for MMS at the time. So my
19 responsibilities were the complete end to end design
20 of how we were going to basically take the Picture
21 Mail platform and move that platform into our core
22 network. We, Sprint, had purchased some MMS servers
23 from Acision, installed those servers into our core
24 network, and we were going to move away from the
25 Syniverse Picture Mail outsourced platform, and we

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1 were going to move that functionality into our core
2 network. So I was the design lead. This was right
3 about the time though when I talked about how I had
4 been given a promotion opportunity. So I was the --
5 again, I was the design lead, so I was in charge of
6 all requirements gathering. I designed how the
7 system was going to be installed into our core
8 network. And then right about the time where it came
9 to actually move the traffic off of the Syniverse
10 outsourced Picture Mail platform onto our network,
11 that's when I had taken the job as the -- my new role
12 in Special Projects. So, again, I handed that
13 responsibility then off to Sean Hoelzle, who is now
14 the lead over the messaging systems.

15 Q Why from your vantage point was Sprint looking to
16 bring the serve -- the MMS servers into its cellular
17 network?

18 A Sure. It's really two points, the first one
19 being bringing them into our core network was
20 consistent with our overall network design
21 philosophy. The second point was really one of
22 control. I've kind of touched on those two things.
23 So the first point of, you know, kind of a consistent
24 design philosophy, all of Sprint's core servers that
25 provide the -- kind of the core services that you

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1 would think of that you pay your cellular provider
2 for, like the ability to make a call, the ability to
3 send a message, those systems were located in our
4 core -- in our core network, right? When the
5 Syniverse Picture Mail platform started, again, it
6 was an outsourced system that we paid Syniverse to
7 provide to us. So we wanted to keep the MMS servers.
8 We wanted to make that consistent by bringing that
9 into our core network so it would sit alongside of
10 our SMS servers or our voice servers, all that kind
11 of stuff.

12 The second part was really about control.
13 Again, the Syniverse Picture Mail platform was
14 completely owned, operated, designed outside of
15 Sprint. It was provided by Syniverse. So from a
16 control perspective, we wanted to bring it into our
17 network so that we could control the features that
18 were developed, the time frame in which those
19 features were developed, and, more importantly, if
20 there was an outage, something was going wrong with
21 that platform, that we had ultimate control over
22 fixing it. It wasn't just something where we filed a
23 ticket somewhere and hoped one day it would be fixed.
24 So, again, control and philosophy.

25 Q Thank you. You can put that exhibit aside.

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1 A Sure.

2 Q Could you turn, please, to DX-214? It might be
3 your third tab there.

4 A Sure.

5 Q When you get to it just let me know if you've
6 seen that before.

7 A Sure. This is a diagram that I created as part
8 of the -- in my role as the design lead for the SMS
9 and MMS systems.

10 Q Could you describe the document to the jury?

11 A Sure. This document is what we like to refer to
12 as a logical diagram. It basically shows you the
13 functions that systems do. It doesn't necessarily
14 tell you where they're located or anything like that
15 from -- it doesn't say like oh, this server is in
16 Phoenix or this server is in Denver. It's a
17 functional diagram. This diagram was created during
18 what I refer to as the requirements phase of the
19 Picture Mail replacement project. Again, we were
20 moving off of the Syniverse-hosted platform and
21 moving those servers into our core network. And so
22 this diagram was created early on by me as an
23 understanding of okay, what is it we have to create,
24 what is it we have to bring in, what are the
25 requirements? That's the intent of this diagram.

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1 Q Okay. Can you walk us through it a little bit
2 starting with the left side?

3 A Sure. So, again, the intent, this was created
4 for the Picture Mail replacement project. That's why
5 if you look on the left-hand side here, the large box
6 that says "Syniverse" with the acronyms -- with the
7 acronym "ASP" -- "ASP" stands for "application
8 service provider." Syniverse was a vendor that
9 provided us an application that we paid a fee for.
10 That's what that box is. So that's essentially the
11 Syniverse Picture Mail platform. If you look inside
12 of that black box, if you will, you see an MMS
13 server, and that's the main box there, the MMSC.

14 Now, if you look on the right of the
15 diagram, these are the elements within Sprint's core
16 that the Syniverse Picture Mail platform would speak
17 to. So you see things like our SMSC. That is our
18 SMS server. You see things such as SPS, which is our
19 subscriber database. These elements are inside
20 Sprint's core network and these are the elements that
21 the Syniverse Picture Mail platform would have to
22 speak to in order to perform its job.

23 Q Approximately when did you prepare this document?

24 A Sure.

25 Q I prepared this document roughly mid-2011. I

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1 know in my deposition with the Comcast lawyers we had
2 kind of gone back and forth as far as with the exact
3 date this document was created. At the time of my
4 deposition I didn't feel comfortable giving an exact
5 date. If you remember, I had since moved on from
6 messaging and I had seen and basically was presented
7 this document five, six years away from being removed
8 from its creation. So I didn't feel comfortable at
9 the time knowing the exact date, but what I can tell
10 you is that I know the context in which it was
11 created, and it was created, like I said, during the
12 requirements phase. So it was part of us trying to
13 figure out what's in the black box at Syniverse. And
14 knowing the context of the entire project, I can -- I
15 feel absolutely comfortable saying that this was
16 created mid-2011.

17 Q Does the drawing here accurately depict Sprint's
18 understanding of the makeup and interaction with the
19 Syniverse project -- product, not project?

20 A Yeah. It does. Again, like I said, the
21 Syniverse Picture Mail platform was outsourced, and
22 because it was outsourced they provided us zero
23 documentation of what it was actually doing. We
24 weren't privy to that information. We just paid them
25 a fee and they gave us a service. So, again, this

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1 document reflects my accurate understanding at the
2 time of what was going on inside that black box
3 within Syniverse. And so absolutely, yes, it
4 accurately reflects this. I know, again, in my
5 deposition with the Comcast lawyers I was asked if
6 this document was 100 percent correct. I didn't feel
7 at the time that I could give a label of 100 percent
8 correct because, again, it reflected my understanding
9 of peering in this black box of what I thought was
10 there. In the deposition we kind of gone back and
11 forth and he had wanted me to assign a percentage of
12 correctness to this diagram. Again, I didn't feel
13 comfortable giving a percentage of correctness, but I
14 can tell you that as a Sprint engineer, we don't
15 produce documents that are intended to be incorrect.

16 So this was indeed my accurate
17 understanding of what was going on within the
18 Syniverse Picture Mail platform at the time it was
19 created. But even at a higher level, it absolutely
20 depicts the correct understanding that the Syniverse
21 Picture Mail platform was hosted outside of Sprint's
22 core network, and the elements that were contained
23 within Sprint's core network, that being the SMS
24 server, that being the SPS database, yeah, those
25 were -- those were absolutely within our core

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1 network, so yes, it accurately represents what it was
2 intended to do.

3 Q Okay. You can put that exhibit aside.

4 A Sure.

5 Q And we're going to move to DX-229.

6 A Okay.

7 Q Do you recognize this document?

8 A I do. Again, this is a document that I created
9 in my role as design lead over the SMS and MMS
10 systems at Sprint.

11 Q Okay. Can you walk us through the diagram and
12 what you were trying to depict?

13 A Sure. Again, this diagram -- again, what we'll
14 refer to as a logical diagram, this diagram was
15 created as part of the Picture Mail replacement
16 project, and, again, it was created during the
17 requirement phase of that project. If you can
18 remember the last diagram that we looked at, it was a
19 little bit more basic in nature than this diagram.
20 This has a bit more details. All that is showing you
21 is that as we understood more and more requirements
22 of what Syniverse was doing and what it was we had to
23 replace, those details are now reflected in this
24 document, right? So this is a document that would
25 have been produced after the previous document,

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1 right?

2 So, again, the main focus of this document
3 was really understanding what was going on inside
4 that black box within Syniverse, right? And that's
5 why that -- if you look at the rose-colored large box
6 in the middle, that's why it's front and center,
7 right? That's what we're trying to understand is
8 what's going on at Syniverse.

9 Now, in addition to that, when you design a
10 system one thing is you have to understand what it's
11 doing, but you also have to understand what is it
12 talking to, right? And so that's the elements you
13 kind of see around the Syniverse large box in the
14 middle is these are the other elements that the
15 Syniverse Picture Mail platform was talking to. In
16 particular, if you look at the bottom of the document
17 where you see -- where it's listed like Sprint NOB,
18 or Sprint NOB Reston, these represent Sprint's core
19 network. NOB is simply an acronym we use. We call
20 our -- one of our datacenters the North Bunker. And
21 so that's why we call it NOB. The other box kind of
22 says "Reston." We have a Reston datacenter as well.
23 So this starts to put some physical stuff, like where
24 these things are located, but it's largely just a
25 logical diagram.

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1 So if you look at the Sprint NOB, right,
2 Sprint's core network datacenter, you see things,
3 again, in there like SMSC. That's our SMS servers.
4 You see, again, SPS. That's the subscriber database.
5 So those are the elements within Sprint's core
6 network that the Syniverse Picture Mail platform,
7 the -- those MMS servers would talk to. And if you
8 look at the -- you see these clouds here, right? You
9 see an internet cloud on the left, you see an OSSN
10 VPN cloud. All those clouds are trying to articulate
11 is this is -- like it's kind of a form of
12 communication, like how are -- how is the Syniverse
13 Picture Mail platform talking to these other
14 elements?

15 So the internet -- it's just like if you
16 would log on a computer and pull up google.com. It
17 just goes out over the internet. Nothing fancy, just
18 plain old internet, right? But if you look at the
19 bottom here, especially how the Picture Mail platform
20 talks to Sprint's core network, it's over this what
21 we call VPN. So that's how -- you see a VPN here
22 talking to Sprint and you see a VPN talking to other
23 entities on the right, like it could be anyone else.
24 Like if you see -- way on the right you see like four
25 end carriers, that how the Picture Mail platform

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1 would talk to other carriers say in Europe or
2 something like that, still over VPN.

3 Q Does anything inside Sprint's network require a
4 VPN?

5 A No, not at all. Again, VPN stands for -- it's
6 called a virtual private network, and all it is is it
7 is a secure, encrypted way that two networks or
8 elements within a network can talk to each other. So
9 it's just to prevent eavesdropping, right? So it's
10 just like if you -- you know, if you work for a
11 company and you go home on the weekend and you take
12 your laptop home and you want to do something on the
13 corporate network, you would fire up what's called a
14 VPN client on your home laptop, and that way you
15 could establish a secure way of talking to the home
16 network. That's why what you see here is the
17 Syniverse Picture Mail platform was outside of
18 Sprint's core network, so whenever it had to speak to
19 the elements within -- inside Sprint's core network,
20 it had to do so via an encrypted channel because,
21 again, these two networks weren't trusted, if you
22 will.

23 Likewise, if you look within the Sprint
24 core network, right, if you look at the SMSC or the
25 SPS, none of those elements require a VPN when they

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1 talk to each other because they're on the core
2 network. It's a trusted network. We don't require
3 an extra level of encryption or untrustedness, if you
4 will, when those elements talk to each other because
5 they're all within the core network.

6 Q Okay. You can put that exhibit aside.

7 THE COURT: And now we'll recess. It's
8 12:40. We'll recess for an hour, okay? Mid-day
9 instructions. You know more and more about the case.
10 Do not discuss it among yourselves, notwithstanding
11 the temptation to do so. I told you why. You can't
12 begin deliberating until the very end of the case,
13 until all the evidence is received, until the
14 attorneys have made their closing arguments and
15 you've heard my instructions on the law. If anyone
16 tries to talk to you about the case, do not discuss
17 it with them. Say nothing to them and notify me of
18 that attempted contact.

19 I want to remind you that you're not to
20 have any contact, eye contact or any other contact,
21 with any of the people who have been conducting the
22 examination of witnesses or any of the people you see
23 or might recognize in the courtroom. I'll have
24 further instructions at day-end I'm sure. You now
25 know them well enough to give them to yourselves, but

1 I'm going to keep giving you these instructions.

2 On that note, Michael, we're in recess
3 until 1:40.

4 (Jury out, 12:40 p.m.)

5 THE COURT: We are in recess for an hour.

6 You may step down, sir.

7 (Luncheon recess taken, 12:41 p.m.)

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I N D E XDEFENDANT'S WITNESSES DIRECT CROSS REDIRECT RECROSS

Mark Yarkosky

By Mr. Hangley

3

Mark Lipford

By Mr. Finkelson

44

111

By Mr. Goettle

69

112

David Wilson

By Ms. Simpson

113

DEFENDANT'S EXHIBITSADMITTED INTO EVIDENCE

13

Document

27

4, 5, 6, 7, 8

Documents

49

21, 209, 214, 229

Documents

119

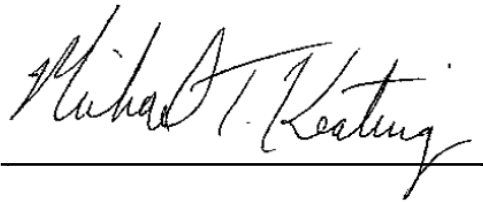
* * *

CERTIFICATION

I, Michael Keating, do hereby certify that
the foregoing is a true and correct transcript from the
electronic sound recordings of the proceedings in the
above-captioned matter.

2/7/17

Date

A handwritten signature in cursive script, reading "Michael T. Keating", written over a horizontal line.

Michael Keating